



NEW CINGULAR WIRELESS PCS, LLC (AT&T)

**Application to the
State of Connecticut Siting Council**

**For a Certificate of
Environmental Compatibility and Public Need**

—LAKEVILLE FACILITY—

Docket No. ____

**NEW CINGULAR WIRELESS PCS, LLC (AT&T)
84 DEERFIELD LANE
MERIDEN, CONNECTICUT 06450**

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1. AT&T's Statement of Radio Frequency (RF) Need with Coverage Plots
2. Summary of Site Search and List of Existing Tower/Cell Sites
3. General Facility Description, Site Evaluation Report, Facilities and Equipment Specifications, Site Impact Statement, Tree Inventory, List of Residential Buildings within 1,000'
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5. Environmental Assessment Statement
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9. State Historic Preservation Office (SHPO) and CT Department of Energy and Environmental Protection (DEEP) Correspondence
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I. Introduction

A. Purpose and Authority

Pursuant to Chapter 277a, § 16-50g et seq. of the Connecticut General Statutes (C.G.S.), as amended, and § 16-50j-1 et seq. of the Regulations of Connecticut State Agencies (R.C.S.A.), as amended, New Cingular Wireless PCS, LLC (“AT&T”) (the “Applicant”), hereby submits an application and supporting documentation (collectively, the “Application”) for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications tower facility (the “Facility”). The Facility is proposed on an 11.52-acre parcel of land owned by Wake Robin, LLC with an address of 106 Sharon Road in the Village of Lakeville within the Town of Salisbury (the “Parcel”). The Parcel is improved with a private inn known as the Wake Robin Inn and associated amenities. The Facility is proposed within an approximately 10,000 square-foot (“s.f.”) lease area in the south-central section of the Parcel. Construction of the Facility will permit AT&T and one other FCC-licensed wireless carrier to provide reliable wireless services, as well as emergency communication services, to residents, visitors, businesses, the Hotchkiss School and key traffic corridors in central and southern portions of the Village of Lakeville.

B. Executive Summary

It is well established that the Village of Lakeville in the Town of Salisbury suffers from a lack of reliable wireless services. The Facility will provide reliable wireless communications services to the central and southern areas of Lakeville and address the significant coverage deficiency in the existing AT&T wireless communications network along the nearby roadways and the neighboring residential and business/retail areas in Lakeville. The Facility is needed by AT&T in conjunction with other existing facilities to provide reliable wireless services to the public that is not currently provided in this part of Salisbury. AT&T will also deploy FirstNet, a nationwide broadband public safety network dedicated to the needs of first responders. The area is characterized by significant changes in ground elevation resulting in challenging terrain for signal propagation as well as several forested parcels. The challenging terrain and distance between existing wireless sites and the targeted coverage area result in limited options for AT&T to provide reliable wireless services.

AT&T investigated parcels of land in and around Lakeville. These searches determined that there are no tall structures located within the identified area of need and other sites investigated were technically inadequate to satisfy coverage requirements in this part of the state.

The Facility consists of a new self-supporting monopole 94' in height with a lightning rod extending an additional 6' above the top of the pole, bringing the total height to approximately 100'. The monopole tower will be located within a 2,500 s.f. fenced equipment compound located within the 10,000 s.f. lease area in the south-central portion of the Parcel. AT&T's antennas would be installed at an antenna centerline height of approximately 90' on the monopole tower with a walk-in equipment cabinet and emergency back-up diesel generator located within the equipment compound. The monopole tower and fenced equipment compound are designed to support the antennas and equipment of one other FCC licensed wireless carrier. Access and utilities to the Facility will be provided along the proposed access road and existing driveway to Sharon Road. The facility will be unmanned with no sanitary or water services and will generate on average 1 vehicle trip per month by each wireless carrier consisting of a service technician in a light duty van or truck.

The Applicant respectfully submits that the public need for a tower to provide reliable wireless services to Lakeville far outweighs any potential adverse environmental effects from the Facility as proposed in this Application. Indeed, the Facility will provide the important benefit of reliable wireless services to the nearby roadways and the neighboring residential and business/retail areas as well as reliable emergency communication services, including FirstNet, and will not have any substantial adverse effect on the aesthetics or scenic quality of the neighborhood.

C. The Applicant

New Cingular Wireless PCS, LLC ("AT&T"), is a Delaware limited liability company with an office at 84 Deerfield Lane, Meriden, Connecticut 06450. The company's member corporation is licensed by the Federal Communications Commission ("FCC") to construct and operate a personal wireless services system, which has been interpreted as a "cellular system", within the meaning of C.G.S. Section 16-50i(a)(6). AT&T entered into a long-term lease with Wake Robin, LLC. AT&T will construct, maintain, operate and own the Facility and would be the Certificate holder.

AT&T does not conduct any other business in the State of Connecticut other than the development of tower sites and provision of personal wireless services under FCC rules and regulations. Correspondence and/or communications regarding this Application shall be addressed to the attorneys for the Applicant:

Cuddy & Feder, LLP
445 Hamilton Avenue, 14th Floor
White Plains, New York 10601
Attention: Lucia Chiocchio, Esq.
Kristen Motel, Esq.

A copy of all correspondence shall also be sent to:

AT&T
84 Deerfield Lane
Meriden, CT 06450
Attention: Brian Leyden
Harry Carey

D. Application Fee

Pursuant to R.C.S.A. § 16-50v-1a(b), a check made payable to the Siting Council in the amount of \$1,250 accompanies this Application. Included in this Application and its accompanying attachments are reports, plans and visual materials detailing the design and location for the Facility and the environmental effects associated therewith. A copy of the Siting Council's Community Antennas Television and Telecommunication Facilities Application Guide with page references from this Application is also included in Attachment 14.

E. Compliance with C.G.S. §16-50/ (c)

The Applicant is not engaged in generating electric power in the State of Connecticut. Therefore, the Facility is not subject to C.G.S. § 16-50r. Furthermore, the Facility has not been identified in any annual forecast reports. Accordingly, the Facility is not subject to § 16-50/ (c).

II. Service and Notice Required by C.G.S. § 16-50/ (b)

Pursuant to C.G.S. § 16-50/ (b), copies of this Application have been sent by certified mail to municipal, regional, state, and federal officials. A certificate of service, along with a list of the parties served with a copy of the Application are included in Attachment 13. Pursuant to C.G.S. § 16-50/ (b), notice of the Applicant's intent to submit this Application was published on two occasions in The Republican American, the publication used for planning and zoning notices in the Town of Salisbury. The text of the published legal notice is included in Attachment 12. The original affidavits of publication will be provided to the Siting Council once received from the publisher. Furthermore, in compliance with C.G.S. § 16-50/ (b), notices were sent to each person or entity appearing of record as the owner of a property which abuts the premises on which the Facility is proposed. Certification of such notice, a sample notice letter, and the list of property owners to whom the notice was mailed are also included in Attachment 12.

III. Statements of Need and Benefits**A. Statement of Need****1. United States Policy & Law - Wireless Facilities**

United States policy and laws continue to support the growth of wireless networks. In 1996, the United States Congress recognized the important public need for high quality wireless communications service throughout the United States in part through adoption of the Telecommunications Act (the "Act"). A core purpose of the Act was to "provide for a competitive, deregulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies to all Americans." H.R. Rep. No. 104-458, at 206 (1996) (Conf. Rep.). With respect to wireless communications services, the Act expressly preserved state and/or local land use authority over wireless facilities, placed several requirements and legal limitations on the exercise of such authority, and preempted state or local regulatory oversight in the area of emissions as more fully set forth in 47 U.S.C. § 332(c)(7). In essence, Congress struck a balance between legitimate areas of state and/or local regulatory control over wireless infrastructure and the public's interest in its timely deployment to meet the public need for wireless services.

In December 2009, then President Obama issued Proclamation 8460 which included wireless facilities within his definition of the nation's critical infrastructure and declared in part:

Critical infrastructure protection is an essential element of a resilient and secure nation. Critical infrastructure are the assets, systems, and networks, whether physical or virtual, so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, public health or safety. From water systems to computer networks, power grids to cellular phone towers, risks to critical infrastructure can result from a complex combination of threats and hazards, including terrorist attacks, accidents, and natural disasters.¹

Congress and the Federal Communications Commission further developed a national plan entitled "Connecting America: The National Broadband Plan" (the "Plan").² Although broad in scope, the Plan's goal is undeniably clear:

[A]dvance consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, employee training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.³ [internal quotes omitted]

A specific goal of the Plan is that "[t]he United States should lead the world in mobile innovation, with the fastest and most extensive wireless networks of any nation."⁴

Shortly after adoption of the Plan, and in April 2011, the FCC issued a Notice of Inquiry concerning the best practices available to achieve wide-reaching broadband capabilities

¹ Presidential Proclamation No. 8460, 74 C.F.R. 234 (2009).

² *Connecting America: The National Broadband Plan*, Federal Communications Commission (2010), available at <https://www.fcc.gov/general/national-broadband-plan>.

³ Id. at XI.

⁴ Id. at 25.

across the nation including better wireless access for the public.⁵ The FCC also adopted various orders in furtherance of the public need for the deployment of wireless infrastructure including specific time limits for decisions on land use and zoning permit applications.⁶ Congress also acted again when it passed the Middle Class Tax Relief and Job Creation Act of 2012, which includes Section 6409 in the Spectrum Act which preempts a discretionary review process for eligible modifications of existing wireless towers or base stations.

In 2018, the FCC adopted two separate orders incorporating several declaratory rulings and a set of new regulations to specifically address various areas of state and municipal oversight of wireless facility siting including towers and small cells.⁷ The first order prohibits any actual or de facto moratoria on the siting of wireless facilities. The second, intended to streamline the siting of current 4G LTE and future 5G wireless infrastructure, addressed numerous provisions of the Telecommunications Act and focused on any state or local siting requirements that might materially inhibit the deployment of wireless facilities including small cells. In October of 2018, a national strategy was developed for the United States to win the 5G global race and continue American leadership in wireless technology.⁸

Most recently, the pandemic underscored the critical importance of reliable wireless services as various government entities issued stay-at-home orders and Americans utilized wireless services for work, school, telehealth, deliveries, etc. Indeed, telecommunications was deemed an essential service during the pandemic state of emergency. The federal government also identifies the continued operation and growth of telecommunications capabilities as vital during this unprecedented time. On March 16, 2020, the Director of the United States Department of Homeland Security, Cybersecurity

⁵ FCC 11-51: Notice of Inquiry, In the Matter of Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting, available at <https://docs.fcc.gov/public/attachments/FCC-11-51A1.pdf>.

⁶ WT Docket No. 08-165- Declaratory Ruling on Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance.

⁷ WT Docket No. 17-79 - Declaratory Ruling and Third Report and Order, Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment.

⁸ See <https://www.whitehouse.gov/presidential-actions/presidential-memorandum-developing-sustainable-spectrum-strategy-americas-future> and <https://www.whitehouse.gov/articles/america-will-win-global-race-5g>

and Infrastructure Security Agency, National Communications Coordination Branch issued a directive ordering cooperation and access to allow telecommunications providers to maintain their infrastructure to ensure the continuation of critical communication capabilities during the COVID-19 pandemic.⁹

2. United States Wireless Usage Statistics

Over the past thirty plus years, wireless communications have revolutionized the way Americans live, work and play. The ability to connect with one another in a mobile environment has proven essential to the public's health, safety and welfare. As of June 2020, there were an estimated over 442.5 million wireless devices in the United States amounting to approximately 1.3 devices per person.¹⁰ The United States also saw a record-setting amount of data-traffic with over 37 trillion megabytes carried over U.S. wireless networks in 2019, which translates to 96-times more data used in 2019 than 2010.¹¹ The pandemic resulted in a 24.3% increase in voice traffic and a 19.6% increase in U.S. data traffic.¹² The ever-increasing number of households transitioning to mobile voice connection only (i.e. abandoning land lines) has now grown to approximately 62.5% of households nationwide.¹³ As of 2016, Connecticut in contrast lags behind in this statistic with approximately 40.8% wireless only households.¹⁴

Wireless access has also provided individuals a newfound form of safety. Up to 80% of all 9-1-1 calls made each year come from a wireless device.¹⁵ Beginning May 15, 2015, wireless carriers in the U.S. voluntarily supported Text-to-911, a program that allows

⁹ <https://www.cisa.gov/news/2020/03/19/cisa-releases-guidance-essential-critical-infrastructure-workers-during-covid-19>

¹⁰ CTIA 2020 Annual Survey Highlights available at <https://www.ctia.org/news/report-2020-annual-survey-highlights>.

¹¹ Id.

¹² Id.

¹³ See *Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January-June 2020*, National Center for Health Statistics, Stephen J. Blumberg Ph.D and Julian V. Luke, found at <https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless202102-508.pdf>.

¹⁴ See *Modeled Estimates of the percent distribution of household telephone status for adults aged 18 and over, by state: United States*, 2018 available at https://www.cdc.gov/nchs/data/nhis/earlyrelease/Wireless_state_201912-508.pdf.

¹⁵ 911 Wireless Services Guide last reviewed November 2, 2015 available at <https://transition.fcc.gov/cgb/consumerfacts/wireless911srv.pdf>.

users to send text messages to emergency services as an alternative to placing a phone call.¹⁶

Wireless access to the internet has also grown exponentially since the advent of the truly “smartphone” device. Cisco reports that mobile data traffic will continue to grow significantly, reaching 77.5 exabytes per month by 2022 which is an exponential increase from the 4.4 exabytes per month at the end of 2015.¹⁷ As of 2018, smartphone data traffic has surpassed that of fixed broadband.¹⁸

3. Public Need For A Tower For Wireless Services

The Facility proposed in this Application will be an integral component of AT&T’s network in its FCC licensed areas throughout the state. There is a significant deficiency in AT&T’s wireless communications service in the south-central part of the Town of Salisbury in the Village of Lakeville. The Facility will provide reliable services in AT&T’s network to an area of the Village currently experiencing deficient coverage, including along State Highway 41 (Sharon Road/ Main Street), State Highway 112 (Interlaken Road/ Lime Rock Road), Wells Hill Road, Farnam Road, and other local roads, as well as the downtown Lakeville business district and neighboring residential areas. The Facility will also provide reliable service to the Hotchkiss School, which has a student/faculty/employee population of over 775. AT&T will also deploy FirstNet at this Facility, which is a nationwide broadband public safety network dedicated to the needs of first responders.

¹⁶ See *Text-to-911: What you need to know* available at <https://www.fcc.gov/consumers/guides/what-you-need-know-about-text-911>. It should be noted that while the carriers have committed to supporting 911 texting in their service areas, text-to-911 is not available everywhere. Emergency call centers, called PSAPs (Public Safety Answering Points), are the bodies in charge of implementing text messaging in their areas. These PSAPs are under the jurisdiction of their local state and counties, not the FCC, which governs the carriers. See also *Text-to-911 is now available in Connecticut* available at <https://www.text911ct.org/>, indicating that the State of Connecticut has recently transitioned to the Text-to-911.

¹⁷ Cisco *Visual Networking Index: Forecast and Trends, 2017-2022 White Paper*, February 18, 2019; Cisco *Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2016-2021*, March 28, 2017.

¹⁸ PriceWaterhouseCoopers as reported by CTIA; <https://www.ctia.org/the-wireless-industry/infographics-library>.

Attachment 1 is a Radio Frequency Engineering Report with coverage plots depicting the “Current Coverage” provided by AT&T’s existing facilities in this area of the state and “Proposed Coverage” as predicted from the Facility together with existing coverage from adjacent sites. Additional statistics regarding the overall area, population and roadway miles of expanded coverage in the community are included in AT&T’s report.

B. Statement of Benefits

The existing AT&T wireless communication network has a significant coverage deficiency in the Village of Lakeville. The benefits to the residents, visitors and businesses of the Village from the Facility are substantial and include:

- 1) In-building and in-vehicle emergency and wireless service to residents who live in the coverage area and travelers in this area that depend on Salisbury’s police, fire and ambulance and do not otherwise have access to reliable wireless services for mobile 911 calls;
- 2) Reliable wireless services to businesses and customers within the Lakeville Business District;
- 3) In-vehicle wireless services along several State, scenic and other arterial roads used for access to schools in the coverage area and by residents;
- 4) Emergency and wireless services at the Hotchkiss School, including outdoor service at numerous athletic fields where access to emergency communications and reliable wireless services is not readily available; and
- 5) FirstNet services for a dedicated network for first responders.

Beyond the above noted benefits, carriers have seen the public’s demand for traditional cellular telephone services in a mobile setting develop into a requirement for anytime-anywhere wireless connectivity with critical reliance placed on the ability to send and receive voice, text, image and video. Provided that network service is available, modern devices allow for interpersonal and internet connectivity, irrespective of whether a user is mobile or stationary, which has led to an increasing percentage of the population to rely on their wireless devices as their primary form of communication for personal, business and emergency needs. This reliance on wireless services became critical during the pandemic for working-from-home, virtual schooling, telehealth appointments and access to food, medication and goods. The Facility would allow AT&T and one additional

carrier to provide these benefits to the public that are not offered by any other form of communication system.

Moreover, AT&T will provide “Enhanced 911” services from the Facility, as required by the Wireless Communications and Public Safety Act of 1999, Pub. L. No. 106-81, 113 Stat. 1286 (codified in relevant part at 47 U.S.C. § 222) (“911 Act”). The purpose of this federal legislation is to promote public safety through the deployment of a seamless, nationwide emergency communications infrastructure that includes wireless communications services. In enacting the 911 Act, Congress recognized that networks that provide for the rapid, efficient deployment of emergency services would enable faster delivery of emergency care with reduced fatalities and severity of injuries. With each year since passage of the 911 Act, additional anecdotal evidence supports the public safety value of improved wireless communications in aiding lost, ill, or injured individuals, such as motorists and hikers. Carriers are able to help 911 public safety dispatchers identify wireless callers’ geographical locations within several hundred feet, a significant benefit to the community associated with any new wireless site.

In 2009, Connecticut became the first state in the nation to establish a statewide emergency notification system. The CT Alert ENS system utilizes the state Enhanced 911 services database to allow the Connecticut Department of Homeland Security and Connecticut State Police to provide targeted alerts to the public and local emergency response personnel alike during life-threatening emergencies, including potential terrorist attacks, Amber Alerts and natural disasters. Pursuant to the Warning, Alert and Response Network Act, Pub. L. No. 109-437, 120 Stat. 1936 (2006) (codified at 47 U.S.C. § 332(d)(1) (WARN), the FCC has established the Personal Localized Alerting Network (PLAN). PLAN will require wireless service providers to issue text message alerts from the President of the United States, the U.S. Department of Homeland Security, the Federal Emergency Management Agency, and the National Weather Service using their networks that include facilities such as the one proposed in this Application. Telecommunications facilities like the one proposed in this Application enable the public to receive e-mails and text messages from the CT Alert ENS system on their mobile devices. The ability of the public to receive targeted alerts based on their geographic location at any given time represents the next evolution in public safety, which will adapt to unanticipated conditions to save lives.

Public safety will also be serviced by AT&T's deployment of FirstNet services from this Facility. FirstNet is a federal agency with a mandate to create a nationwide, interoperable public safety broadband network for first responders.¹⁹ FirstNet selected AT&T to build, manage and operate the FirstNet network. By deploying FirstNet at this Facility, AT&T will provide prioritized, preemptive wireless services for first responders in Lakeville.

C. Technological Alternatives

The FCC licenses granted to wireless carriers operating in Connecticut authorize them to provide wireless services in this area of the state through deployment of a network of wireless transmitting sites. Lakeville is a community with significant changes in ground elevation and forested areas which create a challenging topography for transmitting wireless services in all directions. At this time, there are no known existing tower sites or structures in the Lakeville area that would meet the technical requirements and/or are available for lease or acquisition for construction of a tower site that could support a wireless facility.

Repeaters, microcell transmitters, distributed antenna systems and other types of transmitting technologies are not a practicable or feasible means of addressing the existing coverage deficiency in Lakeville. Technologies like small cells are best suited for specifically defined areas where capacity is necessary, such as commercial buildings, shopping malls, and tunnels. Small cells and other types of transmitting technologies are not viable as an alternative to the need for a replacement macro tower site in Lakeville to continue providing wireless services to the public. Closing the coverage gaps and providing reliable wireless services in Lakeville requires a tower site that can provide reliable service over a footprint that spans several hundred square-feet. The Applicant submits that there are no equally effective, feasible technological alternatives to a new tower for providing reliable personal wireless services in the central and southern portions of the Village of Lakeville.

¹⁹ See https://about.att.com/newsroom/2019/fn_purpose_built_cell_sites.html for more information about FirstNet.

IV. Site Selection and Tower Sharing

A. Site Selection

AT&T currently does not provide reliable services in most areas of central and southern Lakeville, as shown in the Radio Frequency Analysis Report included in Attachment 1. AT&T conducted both propagation modeling and real-world drive testing in Lakeville to define the extent of the coverage gap to be filled. AT&T developed a search ring in the south-central portion of Lakeville to address the coverage gap in this area. In any site search area, the Applicant seeks to avoid the unnecessary proliferation of towers and to reduce the potential adverse environmental effects of a needed facility while ensuring the quality of service provided by the site to users in the network. This particular site search area in Lakeville is predominated by significant changes in ground elevation and challenging terrain. No tall structures are located at the higher elevations in this area of Lakeville. The area surrounding the Village of Lakeville business district consists principally of a mix of single-family residential structures and wooded land.

All viable candidates must have a willing landowner with whom commercially reasonable lease terms may be negotiated. Preference is given to locations that closely comply with local zoning ordinances, or in the event no viable candidates are determined to be located within such areas, to identify other potentially suitable locations.

As provided in Attachment 2, AT&T identified and investigated different parcels of land within central and southern Lakeville for construction of a new tower facility. AT&T's site search efforts date back approximately eight years. The site search summary identifies 3 other sites investigated and details the reasons those sites were deemed inappropriate for the siting of a tower facility or technically inadequate to satisfy AT&T's coverage requirements for this area of need.

B. Tower Sharing

The Facility is designed to accommodate the antennas and equipment of AT&T and one additional wireless carrier for wireless services networks in the Village of Lakeville.

V. Facility Design

The Facility is proposed to be located on Sharon Road in the Village of Lakeville, Town of Salisbury and is identified as Map 47, Lot 2 on the Town of Salisbury's Tax Map. The Parcel is the location of the Wake Robin Inn. The Facility includes an approximately 10,000 s.f. square shaped lease area located in the south-central portion of the approximately 11.52-acre Parcel located at 106 Sharon Road owned by Wake Robin, LLC. The Facility consists of a new self-supporting monopole 94' in height with a lightning rod extending an additional 6' above the top of the pole, bringing the total height to approximately 100'. The tower will be located within a 2,500 s.f. fenced compound enclosed with an 8' high chain link fence. AT&T would install nine (9) antennas with up to eighteen (18) remote radio head units (RRHs) at a centerline height of approximately 90' and will install a walk-in equipment cabinet and an emergency back-up diesel generator at grade on concrete pads within the fenced equipment compound. The fenced equipment compound and the tower would be designed for future shared use by one additional FCC licensed wireless carrier.

Vehicle access to the Facility would be provided from Sharon Road using an existing paved driveway and an existing gravel access way, which will connect to a proposed 12-foot wide approximately 231-foot long gravel driveway on the western portion of the property leading to the proposed compound. Utility connections would be routed underground along the proposed access road and existing driveway to Sharon Road. Attachments 3 and 4 contain the specifications for the Facility, including an abutters map, existing conditions survey, site plan, compound plan and tower elevation, and other relevant details of the Facility.

Included as Attachments 5, 6, 7 and 8 are various documents obtained or created as part of the Applicant's environmental review including a Visibility Analysis (Attachment 8). Some of the relevant information included in Attachments 5, 6, 7 and 8 reveals that:

- Total area of disturbance is approximately 22,765 s.f. and of the 29 trees proposed for removal, ten (10) are 14" or greater dbh. Site improvements entail a net excavation of approximately 269 cubic yards of fill. The base layer of the equipment compound will require approximately 67 cubic yards of structural fill. Approximately 28 cubic yards of rock, 33 cubic yards of washed

stone and 85 cubic yards of gravel base are needed for the compound and driveway construction.

- On-site management of stormwater and erosion controls will be implemented during and after construction and as such, the Facility will have little to no impact on water flow or water quality. No direct impacts to any wetlands or watercourses are anticipated.
- Topography, vegetation and the relative height and design of the Facility will obscure, partially or totally, views of the tower from most locations within the one-mile radius study area during leaf-on conditions.
- The Facility height was reduced from 104' to 90' as part of the Applicant's consultation with the State Historic Preservation Officer ("SHPO") to avoid impacts to historic resources.

VI. Environmental Compatibility

Pursuant to C.G.S. §16-50p (a)(3)(B), the Siting Council is required to find and determine as part of the Application process any probable impact of the Facility on the natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forest and parks, air and water purity, and fish and wildlife. As demonstrated in this Application, the Facility will be constructed in compliance with applicable regulations and guidelines, and best practices will be followed to ensure that the construction of the Facility will not have a significant adverse environmental impact. In addition, the regular operation and monthly maintenance of the Facility will not have a significant environmental impact.

A. Visual Assessment

Included in Attachment 8 is a Visibility Analysis which contains viewshed maps and photo simulations of off-site views. As detailed in the enclosed Visibility Analysis, areas from where the Facility would be visible comprise approximately 248.1+/- acres of visibility during leaf-on conditions, representing approximately 12.34% of the one-mile radius study area. Visibility of the Facility during leaf-off conditions comprises approximately 275.3+/- acres of seasonal visibility, which is approximately 13.70% of the one-mile radius study area.

Approximately 94% of the views during leaf-on conditions, +/- 233.87 acres, are contained within the Wononskupomuc Lake Waterway that is located approximately 0.18 miles to the west of the Facility.

Beyond Wononskupomuc Lake, visibility during leaf-on conditions is concentrated in two main areas - a 3.6-acre area of farmland and residential property along Wells Hill Road to the east-northeast of the site and a 6.1-acre grassy area at the Hotchkiss School property, located approximately 0.87 mile from the Parcel. The majority of views from these two areas will be of approximately the upper most 25% (~23 feet) of the tower. The remaining 4.73 acres of scattered visibility to the north, southwest and east are more than 0.5 miles from the site. Topography, vegetation and the relative height of the tower will obscure, partially or totally, views of the tower from most locations in the study area during leaf-on conditions.

The majority of estimated views during leaf-off conditions are also within the Wononskupomuc Lake waterway. Beyond Wononskupomuc Lake, the majority of these leaf-off views will be in areas to the north, southwest and east that are more than 0.5 miles from the site. These views are predicted to be intermittent, distant and partially obscured by existing vegetation.

There are no schools or commercial childcare centers located within 250' of the Parcel. There are no CT Blue Blazed Trails within the one-mile study area. Moreover, the Visibility Analysis demonstrates that the facility will not have a substantial adverse effect on the aesthetics or scenic quality of the surrounding area.

Weather permitting, the Applicant will raise a balloon with a diameter of at least three (3) feet at the Parcel on the day of the Siting Council's first hearing session on this Application, or at a time otherwise specified by the Siting Council.

B. CT DEEP, SHPO and Other State and Federal Agency Comments

Various consultations and analyses for potential environmental impacts are summarized and included in Attachment 9. Representatives of the Applicant submitted requests for review from federal and state entities including the Connecticut Department of Economic and Community Development State Historic Preservation Office (SHPO).

The Wake Robin Inn, which is located on the Parcel, is eligible for listing on the National Register of Historic Places ("National Register"). The Facility is also located approximately 0.25 miles from St. Mary's Catholic Church, which is eligible for listing on the National Register. Additionally, Lakeville Manor and the Lakeville Historic District, which are listed on the National Register, are within the Area of Potential Effect. Given the proximity to these resources, SHPO requested a reduction in the originally proposed monopole height of 104' and minor amendments to the Facility design. The Applicant incorporated SHPO's requested amendments and upon subsequent review, SHPO indicated that none of the identified historic resources will be impacted by the Facility. See SHPO Review Letter in Attachment 9. As determined by SHPO and demonstrated in the attached Visibility Analysis, no cultural resources will be impacted by the Facility. See Attachments 8 & 9.

While the Facility is not located within an area identified on the DEEP Natural Diversity Data Base ("NDDB") maps as an area that represents approximate locations of endangered, threatened, and special concerns species and significant natural communities in Connecticut, it is located within 0.25 miles of one of these areas as identified on the NDDB maps. Consultation with DEEP indicated that there are no anticipated negative impacts to State-listed species resulting from the Facility. A copy of the May 20, 2020 correspondence from DEEP is included in Attachment 9.

C. Power Density

In August of 1996, the FCC adopted a standard for Maximum Permissible Exposure (MPE) for RF emissions from telecommunications facilities like the one proposed in this Application. The tower site will fully comply with federal and state MPE standards. The cumulative worst-case calculation of power density from AT&T's operations would be 18.21% of the MPE standard. A maximum power density report is included in Attachment 7.

D. Wetlands, Drainage & Other Environmental Factors

A wetland delineation was conducted at the Parcel and there were no wetlands identified in or immediately adjacent to the Facility compound. There are two wetlands on the Parcel. Wetland A is located more than 100' to the east of the Facility compound. Wetland B is located to the west of the existing gravel access drive and paved parking

lot. The proposed construction staging area is within 100' of Wetland B, however no new grading is proposed in this area and erosion controls will be implemented. Proposed sedimentation and erosion controls will be designed, installed, and maintained during construction activities in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control which will minimize any temporary impacts to both Wetlands A and B. Overall, the construction and operation of the Facility will not impact any wetlands or inland waterways. The Wetlands Inspection is included in Attachment 6.

The Facility would be unmanned, requiring monthly maintenance visits approximately one hour long. Carriers that maintain antennas and equipment at an approved Facility monitor their facility 24 hours a day, seven days a week from a remote location. The Facility does not require a water supply or wastewater utilities. No outdoor storage or solid waste receptacles will be needed. Furthermore, the Facility will neither create nor emit any smoke, gas, dust, other air contaminants, noise, odors, nor vibrations other than those created by any heating and ventilation equipment or generators installed by the carriers. During power outages and weekly equipment cycling an emergency generator would be utilized with air emissions in compliance with State of Connecticut requirements. The Environmental Sound Assessment included in Attachment 10 demonstrates that the worst-case sound estimate at the nearest residence, which would occur only when the emergency back-up generator is running at the same time as a supplementary cabinet cooler, is below the DEEP daytime residential Standard.

E. National Environmental Policy Act Review

The Applicant evaluated the project in accordance with the FCC's regulations implementing the National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (codified in relevant part at 42 U.S.C. § 4321 et seq.) ("NEPA"). The Parcel was not identified as a wilderness area, wildlife preserve, National Park, National Forest, National Parkway, Scenic River, State Forest, State Designated Scenic River or State Gameland. Furthermore, according to the site survey and field investigations, no federally regulated wetlands or watercourses will be impacted by the Facility. See the wetland inspection materials included in Attachment 6.

F. Air Navigation

The Facility was analyzed for potential impacts to air navigation. The Applicant prepared a Federal Aviation Administration ("FAA") 1-A Survey and obtained an FAA Determination of No Hazard to Air Navigation Determination. These confirm that no marking or lighting of the tower for air navigation safety is required and that the Facility will not be an obstruction to aviation. See materials included in Attachment 4.

VII. **Consistency with the Town of Salisbury's Land Use Regulations**

Pursuant to the Siting Council's Application Guide, a narrative summary of the consistency of the project with the Town's zoning and wetland regulations and plan of conservation and development is included in this section. A description of the zoning classification of the site and the planned and existing uses of the proposed site location are also detailed in this section.

A. Salisbury's Plan of Conservation and Development

The Salisbury 2012 Plan of Conservation & Development ("POCD"), effective June 30, 2012, is included in the Bulk Filing. POCD Page 38 addresses communications infrastructure and notes that Salisbury's mountainous terrain and other factors contribute to unreliable cell phone coverage. The POCD confirms that "Consideration should be given to strategies for improving cell phone coverage in Salisbury." The Facility will provide reliable coverage to significant portions of central and southern Lakeville. It is respectfully submitted that the Facility fulfills the POCD's goal of improving cell phone coverage in Salisbury.

B. Salisbury's Zoning Regulations and Zoning Classification

Article X of the Town of Salisbury Zoning Regulations provides general requirements for communications tower siting. The Parcel is classified in the Town's Rural Residence 1 ("RR-1") Zoning District. Sections 1000 and 1001 of the Town of Salisbury Zoning Regulations set forth the Town's standards for telecommunication facilities and include guidance for towers and other wireless facilities subject to the jurisdiction of the Siting Council. The table below provides a review of general requirements of tower facilities under the Salisbury Zoning Regulations accompanied by the Facility's overall conformity with those requirements.

Section from the Zoning Regulations	Standard or Preference	Proposed Facility
1000.2	Protect the aesthetic quality of the Town's sky-line and minimize any adverse visual impacts of wireless communications facilities through proper design, siting, and vegetative screening.	The Town's visual quality will be protected from any adverse visual impacts due to the overall low height of the Facility and surrounding topography and vegetation. As demonstrated in the Visibility Analysis included in Attachment 8, views of the Facility during leaf-on conditions comprise +/- 248.1 acres, however approximately 94% of those views are contained within the Wononskupomuc Lake waterway. Views of the Facility during leaf-off conditions increase an additional 27.30 acres, with the majority of those views also being within the Wononskupomuc Lake waterway. The remaining areas of visibility during both leaf-on and leaf-off conditions will be partially obscured by existing vegetation and topography.
1000.2	For new towers, Salisbury expresses its preference that the number of towers be minimized, especially visually prominent ground-mounted towers.	The Facility is designed to accommodate one additional carrier to allow colocation in the future to reduce the need for additional towers.
1000.4	Order and hierarchy of preferences for wireless communication facilities with new towers in locations with the greatest amount screening as the second most preferred location after collocation on existing facilities or structures.	Location of the Facility on existing communication towers, buildings or structures is not feasible due to the lack of existing tall structures or buildings in the area where coverage is needed. The Facility is proposed in a location where existing topography and vegetation provide screening and mitigate long-range visual impacts. See the Site Search Summary in Attachment 2.
1000.7(c)	A new tower application shall demonstrate that service proposed cannot be provided with equipment added to an existing tower and shall include documentation that the antenna height is the minimum	Please refer to Sections III & IV and Attachments 1 & 2 for detailed analyses of need for the Facility and the site search conducted.

	required to provide adequate coverage.	
1000.7(a)	A new tower shall be on a lot of not less than 2 acres and setback from all property lines at a distance equivalent to the height of the tower plus 20%.	As set forth herein, the Facility will be located on an 11.52- acre parcel. The 94' monopole with 6' lightning rod will be setback 375' from the northern property line, 210' from the eastern property line, 308' from the western property line and 140' from the southern property line. Thus, all setbacks are greater than 112.8', the height of the proposed tower plus 20%.
1000.7(b)	Avoid locating wireless communication facilities in the R-10, R-20, LA, C-20 or LI-1 zones unless it is demonstrated that no other location is feasible.	The Facility will be located on property classified in the RR-1 Zoning District. As demonstrated herein, no other location is feasible. See the Site Search Summary in Attachment 2.
1000.10	New towers must have a fence with a minimum height of 8 feet.	The Facility will be located within a compound enclosed by an 8'-high chain link fence.
1000.10	A planting plan shall be provided to screen buildings, fuel tanks, man-made structures and as much of the tower as possible.	Given the existing dense vegetative buffer, it is respectfully submitted that additional vegetative screening is not needed.
1000.10	An evergreen screen shall surround the site and consist of a row of evergreen trees (planted 10 feet on center maximum). The evergreens shall have a minimum height of 6 feet at planting and be of a type that grows to a minimum of 15 feet at maturity.	Given the existing dense vegetative buffer, it is respectfully submitted that additional evergreen screening is not needed.
1000.12	The Applicant will raise a balloon 3 days prior to the date of a public hearing scheduled on the application and the balloon shall remain in place as long as practical. The Planning and Zoning Commission should be notified 48 hours in advance of the date and time that the balloon will be raised.	As discussed in Section VI above, weather permitting, the Applicant will raise a balloon at the Parcel on the day of the Siting Council's first hearing session on this Application, or at a time otherwise specified by the Siting Council. The Siting Council will notice the hearing pursuant to C.G.S. 16-50m(c).

1001.1	No commercial advertising shall be allowed on the tower.	No advertising signs are proposed and any other signage would be minimal in scale and nature and would be limited to no trespassing, warning, FCC registration and associated signs on the compound fencing.
1001.2	No signal lights of illumination of the tower will be permitted unless required by the FCC or FAA.	No illumination is proposed or required by the FCC or FAA. See Attachment 4.
1001.3	Any other use of the tower not necessary to operate/ maintain the tower and associated equipment is prohibited.	No other use of the Facility other than operation and maintenance of the telecommunications tower is proposed.
1001.4	Related unmanned equipment and/or a storage building shall be permitted as long as it contains no more than 750 square feet of gross area and is not more than 12 feet in height.	The proposed walk-in equipment cabinet and associated equipment for the Facility will be located within the fenced 2,500 s.f. compound at the base of the monopole. AT&T's unmanned walk-in-cabinet is approximately 9.5' in height.

C. Planned and Existing Land Uses

The Facility is proposed on an 11.52-acre parcel of land owned by Wake Robin, LLC. The Parcel is located within a mostly rural residential area and contains an existing multi-story 38-room private inn. Development surrounding the Parcel is a mix of forested areas and residential homes to the south, farmland and rural residences to the east and mainly residential areas to the north and west. Consultation with municipal officials did not indicate any planned changes to the existing surrounding land uses. Copies of the Town of Salisbury Zoning Code, Inland Wetlands Regulations, Zoning Map and Plan of Conservation and Development are included in the Bulk Filing.

D. Salisbury's Inland Wetlands and Watercourses Regulations

The Salisbury Inland Wetlands Regulations ("Local Wetlands Regulations") regulate certain activities conducted in "Wetlands" and "Watercourses" as defined therein. The Town established upland review areas for wetlands and watercourses of 100' for regulated activities, with additional review areas applying to land with slopes exceeding 5%, up to a maximum review area of 200'. As set forth in the Wetland Investigation Report in Attachment 6, the Facility is located approximately 102' northwest of the nearest wetland

resource located along the southeastern boundary of the Parcel (Wetland A). An existing access drive is located approximately 81 feet to the east of a wetland resource located to the northwest (Wetland B). The proposed construction staging area, consisting of a gravel parking lot, is proposed within 100 feet of Wetland B. No grading is proposed within the construction staging area and erosion controls will be implemented. Utility installation will take place within the 2,230 square feet of the existing paved area and existing gravel driveway, which are located within 100' of Wetland B.

The Facility is not anticipated to result in an adverse impact to wetlands due to the implementation of erosion and sedimentation controls and distance separating the proposed work activities from the nearest wetland or watercourse. All appropriate sediment and erosion control measures will be designed and employed in accordance with the Connecticut Soil Erosion Control Guidelines, as established by the Connecticut Council of Soil and Water Conservation and DEP (2002). Soil erosion control measures and other best management practices will be established and maintained throughout the construction of the Facility. The Applicant does not anticipate an adverse impact on any wetland or water resources as part of construction or longer term operation of the Facility and respectfully submits that any indirect impacts would be less than those associated with development of the Parcel for a use as a commercial inn.

VIII. Consultation with Town Officials

C.G.S. § 16-50/ generally requires an applicant to consult with the municipality in which a new tower facility may be located for a period of ninety days prior to filing any application with the Siting Council. With respect to the Facility as proposed in this Application, a Technical Report was filed with the Town of Salisbury on June 18, 2020. Amended site drawings and an updated Visibility Analysis, reflecting design changes, including the height reduction addressing comments from SHPO, was submitted to the Town on January 4, 2021.

The Applicant was informed that the Town placed the Technical Report on its website for public access and elected not to conduct an information meeting. According to the Town Planner, no comments on the Technical Report were received. The First Selectman provided a letter of support for the reliable wireless services provided by the proposed Facility. A copy of the First Selectman's letter is included in Attachment 11. Copies of the Technical Report and supplement are included in the Bulk Filing.

IX. Estimated Cost and Schedule

A. Overall Estimated Cost

The total estimated cost of construction for the Facility is represented in the table below.

Requisite Component:	Cost (USD)
Tower & Foundation	98,000
Site Development	72,500
Utility Installation	140,000
Antennas and Equipment	250,000
Total Estimated Costs	560,500

B. Overall Scheduling

Site preparation work would commence following Siting Council approval of a Development and Management (“D&M”) Plan and the issuance of a Building Permit by the Town of Salisbury. The site preparation phase is expected to be completed in approximately 8 weeks. Installation of the monopole, antennas and associated equipment is expected to take an additional 4 weeks. The duration of the total construction schedule is approximately 12 weeks. Facility integration and system testing for carrier equipment is expected to require an additional 2 weeks after construction is completed.

X. Conclusion

This Application and the accompanying materials and documentation clearly demonstrate a public need for a new tower within the central and southern portions of the Village of Lakeville to provide both emergency communications and wireless services to the public. AT&T has a gap in reliable communications in and around this area of the state. The Applicant respectfully submits that the public need for the Facility outweighs any potential environmental effects from development of the tower, none of which have been identified as substantial or significant. Accordingly, the Applicant respectfully requests that the Siting Council grant a Certificate of Environmental Compatibility and Public Need to

AT&T for a new wireless telecommunications Facility in the Village of Lakeville within the Town of Salisbury.

Respectfully Submitted,

By:  _____

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ATTACHMENT 1

Radio Frequency Analysis Report

CT2246
106 Sharon Road Lakeville, CT 06039



February 17, 2021



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1. Overview

C Squared Systems was retained by New Cingular Wireless PCS, LLC (“AT&T”) to evaluate the proposed wireless communications facility at 106 Sharon Road, Lakeville, CT at 90 feet AGL.

AT&T is licensed by the FCC to provide wireless communications services throughout the State of Connecticut including the Village of Lakeville where the proposed facility would be located. The proposed facility has been selected as suitable for implementation of the National Public Safety Broadband Network (“NPSBN”), while also addressing a substantial gap in 4G LTE coverage for AT&T’s network.

This report addresses AT&T’s need for the proposed wireless facility and confirms that there are no other suitable existing structures that could address the coverage gaps in their wireless communications network.

The coverage analysis completed by C Squared Systems confirms: AT&T has a gap in reliable service in Lakeville, and that the Proposed Facility provides AT&T with coverage in that service gap. Included as attachments in this report are coverage maps detailing the existing network and expected coverage from the proposed facility, pertinent site information, terrain and network layout maps.

2. Technology Advances & Design Evolution

AT&T provides digital voice and data services using 3rd Generation (3G) UMTS technology in the 800 MHz and 1900 MHz frequency band, and advanced 4th Generation (4G) services over LTE technology in the 700 MHz and 1900 MHz frequency bands as allocated by the FCC. These data networks are used by mobile devices for fast web browsing, media streaming, and other applications that require broadband connections. The mobile devices that benefit from these advanced data networks are not limited to basic handheld phones, but also include devices such as smartphones, PDA’s, tablets, and laptop air-cards. 4G LTE services and devices have enabled AT&T customers to have even faster connections to people, information, and entertainment.

AT&T will also deploy FirstNet services from this facility. FirstNet is a federal agency with a mandate to create a nationwide, interoperable public safety broadband network for first responders. First responders across the country currently rely on more than 10,000 separate radio networks which oftentimes do not interoperate with one another. By deploying a nationwide broadband public safety network built specifically to meet the communications needs of first responders, the FirstNet network will provide a solution to the decades-long interoperability and communications challenges first responders have experienced, and which was highlighted by the 9/11 Commission’s 2004 Final Report.

FirstNet selected AT&T to build, manage and operate the National Public Safety Broadband Network (“NPSBN”) using FirstNet’s Band 14 spectrum (Call Sign WQQE234, 20 MHz of the 700 MHz spectrum), together with AT&T’s own wireless network. Using a combination of new and existing wireless facilities, AT&T provides prioritized, preemptive wireless services for first responders across Connecticut, New England and nationwide, while also improving 4G LTE coverage for AT&T customers.

It is important to note that with AT&T’s migration from 3G to 4G services come changes in the base station infrastructure and resultant changes in the operating thresholds required by the LTE network. In the past, AT&T has presented receive signal thresholds of -74 dBm for their in-building coverage threshold and -82 dBm for their in-vehicle coverage threshold. Those thresholds were based on network requirements to support 2G/3G data speeds and past usage demand. Today, customers expect low latency and faster data speeds as evidenced by increasing data usage trends and customer demand.

AT&T's 4G LTE technology is designed to thresholds of -83 dBm and -93 dBm for their 700 MHz LTE and -86 dBm and -96 dBm for their 1900 MHz LTE.¹ The stronger thresholds (-83 dBm and -86 dBm) yield greater throughputs and improved customer experience. The -93 dBm and -96 dBm thresholds are the minimum acceptable levels required to meet customer expectations for 4G service.

3. Coverage Objective

There is a significant coverage deficiency in the existing AT&T wireless communications network along State Hwy 41 (Sharon Road/Main Street), State Hwy 112 (Interlaken Road), Hotchkiss School, and the neighboring residential and business/retail areas in Lakeville, referred to herein as the "targeted area". A deficiency in coverage is evidenced by the inability to adequately and reliably transmit/receive quality calls and/or utilize data services offered by the network. Seamless reliable coverage provides users with the ability to successfully originate, receive, and maintain quality calls and data applications throughout a service area. Appropriate overlapping coverage is required for users to be able to move throughout the service area and reliably "hand-off" between cells to maintain uninterrupted connections.

AT&T is expanding and enhancing their 4G LTE high-speed wireless broadband services throughout New England by filling in existing coverage gaps and addressing capacity, interference, and high-speed broadband issues. In addition to improving 4G LTE coverage for AT&T customers, AT&T is also building, managing and operating the National Public Safety Broadband Network using FirstNet's 700 MHz Band 14 spectrum, in order to provide prioritized, preemptive wireless services for first responders across Connecticut, New England and nationwide.

Due to terrain characteristics and the distance between the targeted coverage area and the existing sites, AT&T's options to provide services in this area are quite limited (maps of the terrain in this area and the distance to neighboring AT&T sites from the proposed site are included as Attachments 3 & 4, respectively). AT&T's network requires deployment of antennas throughout the area to be covered. These antennas are connected to receivers and transmitters that operate in a limited geographic area known as a "cell." AT&T's wireless network, including their wireless handsets and devices, operate by transmitting and receiving low power radio frequency signals to and from these cell sites. The signals are transferred to and from the landline telephone network and routed to their destinations by sophisticated electronic equipment. The size of the area served by each cell site is dependent on several factors, including the number of antennas used, the height at which the antennas are deployed, the topography of the land, vegetative cover and natural or man-made obstructions in the area. As customers move throughout the service area, the transmission from the portable devices is automatically transferred to the AT&T facility with the best connection to the device, without interruption in service provided that there is overlapping coverage from the cells.

In order to define the extent of the coverage gap to be filled, both propagation modeling and real-world drive testing has been conducted in the area of Lakeville. Propagation modeling uses PC software to determine the network coverage based on the specific technical parameters of each site including, but not limited to, location, ground elevation, antenna models, antenna heights, and also databases of terrain and ground cover in the area. Drive testing consists of traveling along area roadways in a vehicle equipped with a sophisticated setup of test devices and receivers that collect a variety of network performance metrics. The data are then processed and mapped in conjunction with the propagation modeling to determine the coverage gaps.

¹ The threshold range differences between the 700 MHz and 1900 MHz frequency bands directly correlates to the type branch diversity receivers deployed in AT&T's receiver design.

Analysis of the propagation modeling and drive testing in Lakeville reveal that AT&T's network is unreliable throughout much of the area due to gaps in coverage, and that there is a service deficiency as a result. In order to fill in these coverage gaps and improve the network reliability to Lakeville, a new facility is needed in the area.

Table 1 below approximates the current coverage gap of AT&T's 700 MHz LTE technology in the vicinity of the proposed site.

	Existing 700 MHz LTE Coverage Gap	
Population:²	(\geq -83 dBm)	1,299
	(\geq -93 dBm)	986
Business Pops:³	(\geq -83 dBm)	535
	(\geq -93 dBm)	456
Area (mi²):	(\geq -83 dBm)	22.87
	(\geq -93 dBm)	19.58
Roadway (mi):	Main:	6.72
	Secondary:	24.55
	Total:	31.27

Table 1: Estimated Existing Coverage Gap Statistics

² Population figures are based upon 2010 US Census Block Data

³ Employee population counts are based upon the 2011 U.S. Census Bureau LEHD database.

Included in this report are Attachments 1 through 6, which are explained below to help describe AT&T's 4G network deployment in and around Lakeville, and the need for the proposed facility.

- Attachment 1: *"CT2246 - Existing 700 MHz LTE Coverage" for the Current AT&T Network* depicts 700 MHz LTE coverage from existing sites and demonstrates that there are currently gaps in 700 MHz LTE coverage effecting service within the targeted area. The coverage shown is where the signal strengths are: > -83 dBm (minimum level required reliable, high quality service and performance at 700 MHz) and, > -93 dBm (minimum required for adequate level of service at 700 MHz). In an effort to provide the required levels of coverage to these areas, AT&T is proposing to install a wireless facility at the 106 Sharon Road location.

Please note with respect to the existing coverage depicted in all the attached coverage plots: CT1007 has an antenna centerline that is only 42 feet AGL, so coverage from that site is very limited. CT1180 (which is just south of the area shown in the coverage plots, but shown in Attachment 4: *"Neighbor Sites & Radial Distances"* which is at a wider zoom level) is blocked by terrain to its north. For this reason, it does not provide any coverage in the area shown in the plots.

- Attachment 2: *"CT2246 - Existing 700 MHz LTE Coverage with Proposed Site"* shows how this proposed site would fill in the existing coverage gaps and improve AT&T's 700 MHz LTE network within the targeted area, as detailed in Table 1.
- Attachment 3: *"CT2246 - Area Terrain Map"* details the terrain features around the area of deficient service being targeted by the proposed site in Lakeville. These terrain features play a key role in determining site designs and dictating the unique coverage achieved from a given location. This map is included to provide a visual representation of the ridges and valleys that must be considered when siting a wireless facility. The darker green, blue and purple shades correspond to lower elevations, whereas the orange, red and white shades indicate higher elevations.
- Attachment 4: *"CT2246 - Neighbor Sites & Radial Distances"* provides an overview of AT&T's network of sites in the area, with distances shown from the proposed site to the existing AT&T sites in the surrounding area.
- Attachment 5: *"Neighbor Site Data"* provides site specific information of existing neighboring sites used to perform the coverage analysis provided in Attachments 1 and 2.
- Attachment 6: *Connecticut DOT Average Annual Daily Traffic Data – Lakeville* shows the available vehicular traffic volume data for the subject area from the Connecticut Department of Transportation. This data shows as many as 8,500 vehicles per day passing through State Hwy 41 (Sharon Road/Main Street) north of the intersection with Interlaken Road and the intersection with Wells Hill Road and as many as 5,200 vehicles per day passing through State Hwy 112 (Interlaken Road) west of the intersection with Sharon Road.

Table 2 below lists the coverage statistics compiled for the AT&T's 700 MHz 4G LTE network with the deployment of the Proposed Site.

	Incremental Coverage from Proposed Site (700 MHz)	
Population: ⁴	(\geq -83 dBm)	378
	(\geq -93 dBm)	757
Business Pops: ⁵	(\geq -83 dBm)	585
	(\geq -93 dBm)	866
Area (mi²):	(\geq -83 dBm)	2.4
	(\geq -93 dBm)	5.2
Roadway (mi):	Main:	5.1
	Secondary:	15.8
	Total:	20.9

Table 2: Coverage Statistics

⁴ Population figures are based upon 2010 US Census Block Data

⁵ Employee population counts are based upon the 2011 U.S. Census Bureau LEHD database.

4. Conclusion

AT&T has identified an area of deficient coverage affecting a significant portion of Lakeville CT, including key traffic corridors through the residential and business/retail areas of the Village. The proposed Lakeville Proposed facility will bring the needed fill-in coverage to significant portions of State Hwy 41 (Sharon Road/Main Street), Lincoln City Road, State Hwy 112 (Interlaken/Lime Rock Road) , Hotchkiss School, and the residential neighborhoods and business/retail areas in the vicinity of the proposed location.

No existing structures were identified and available that would be able to satisfy the coverage requirements needed for this area.

As discussed in this report and depicted in the attached plots, the proposed interim AT&T site will provide a substantial portion of the coverage being lost to the “target area” while maintaining effective connectivity to the rest of AT&T’s existing network. In addition to providing improved LTE service to AT&T’s customers to throughout the targeted areas of Lakeville, AT&T is providing enhanced services for first responders through the implementation of FirstNet’s National Public Safety Broadband Network (“NPSBN”).

5. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate.

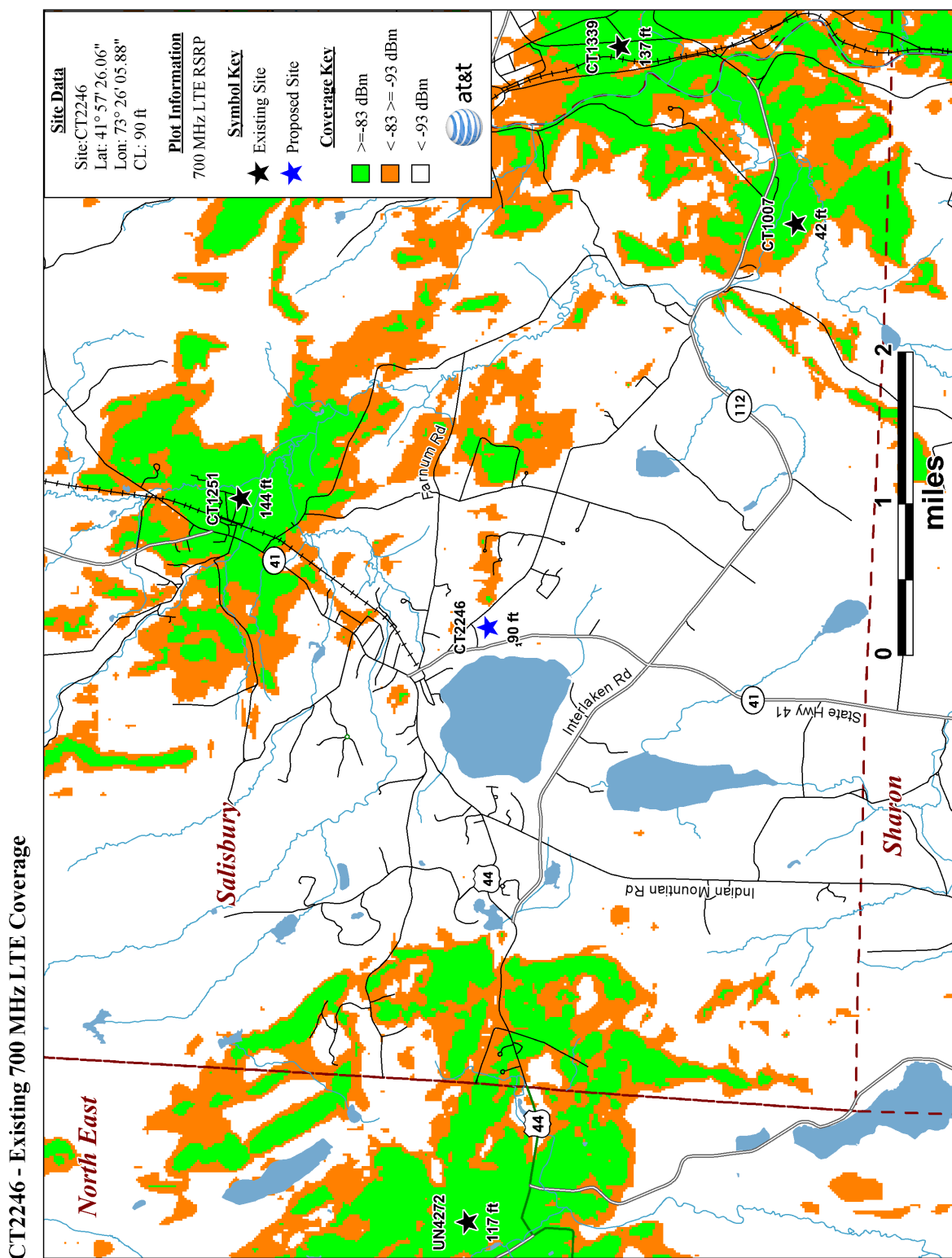


Martin J. Lavin
C Squared Systems, LLC

February 17, 2021

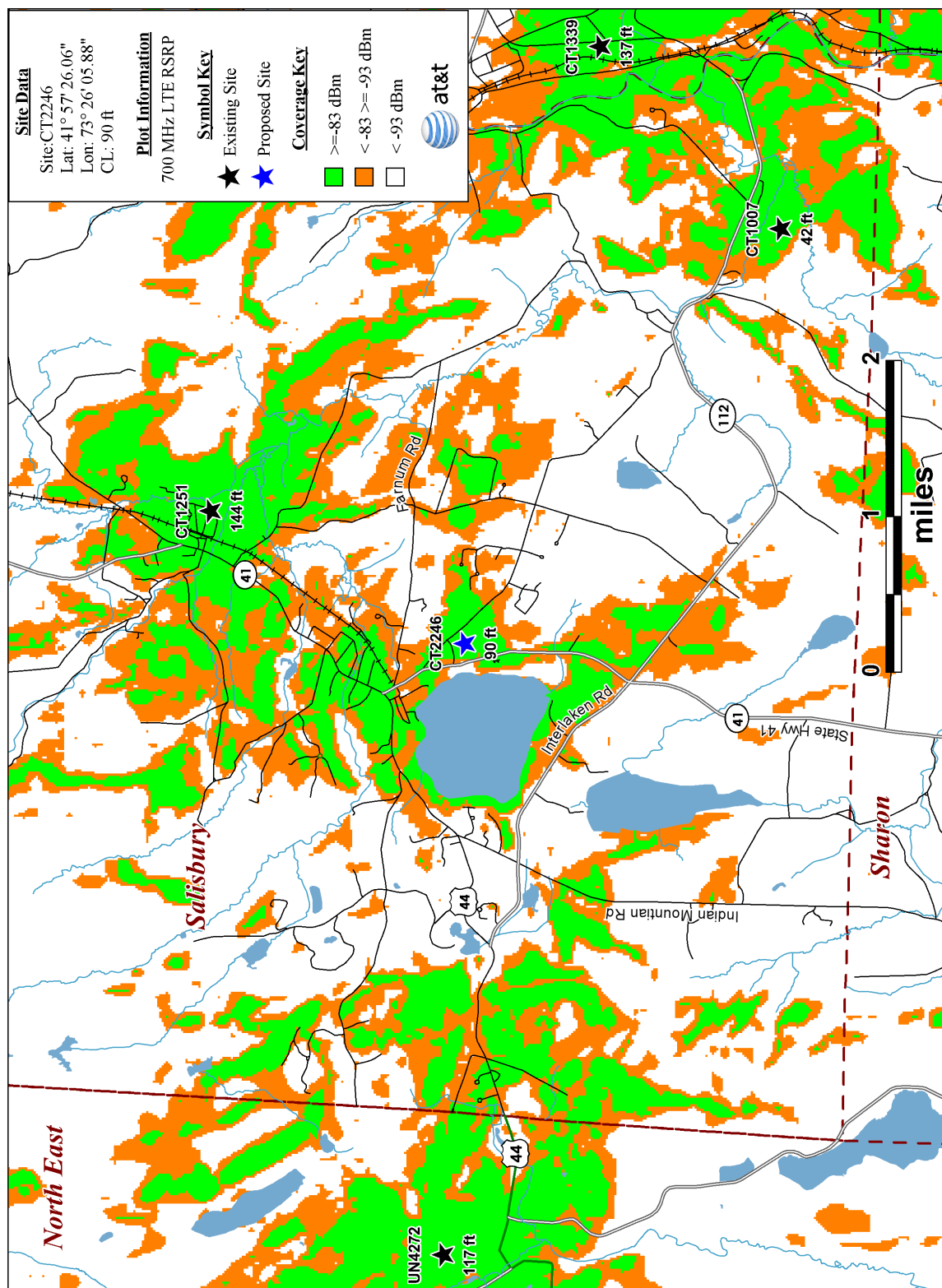
Date

6. Attachments



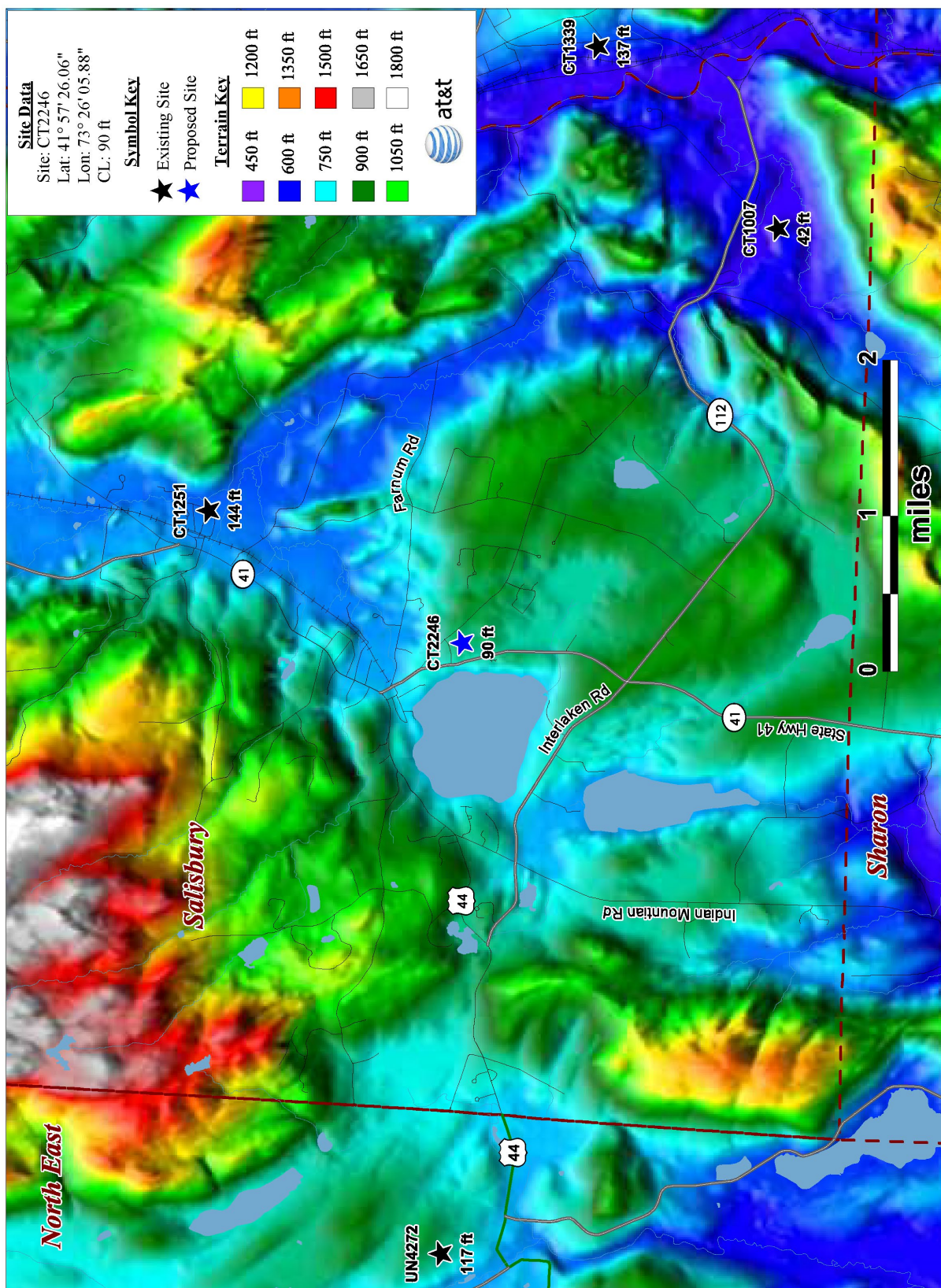
Attachment 1: "CT2246 Existing 700 MHz LTE Coverage" for the Current AT&T Network

CT2246 - Existing 700 MHz LTE Coverage with Proposed Site



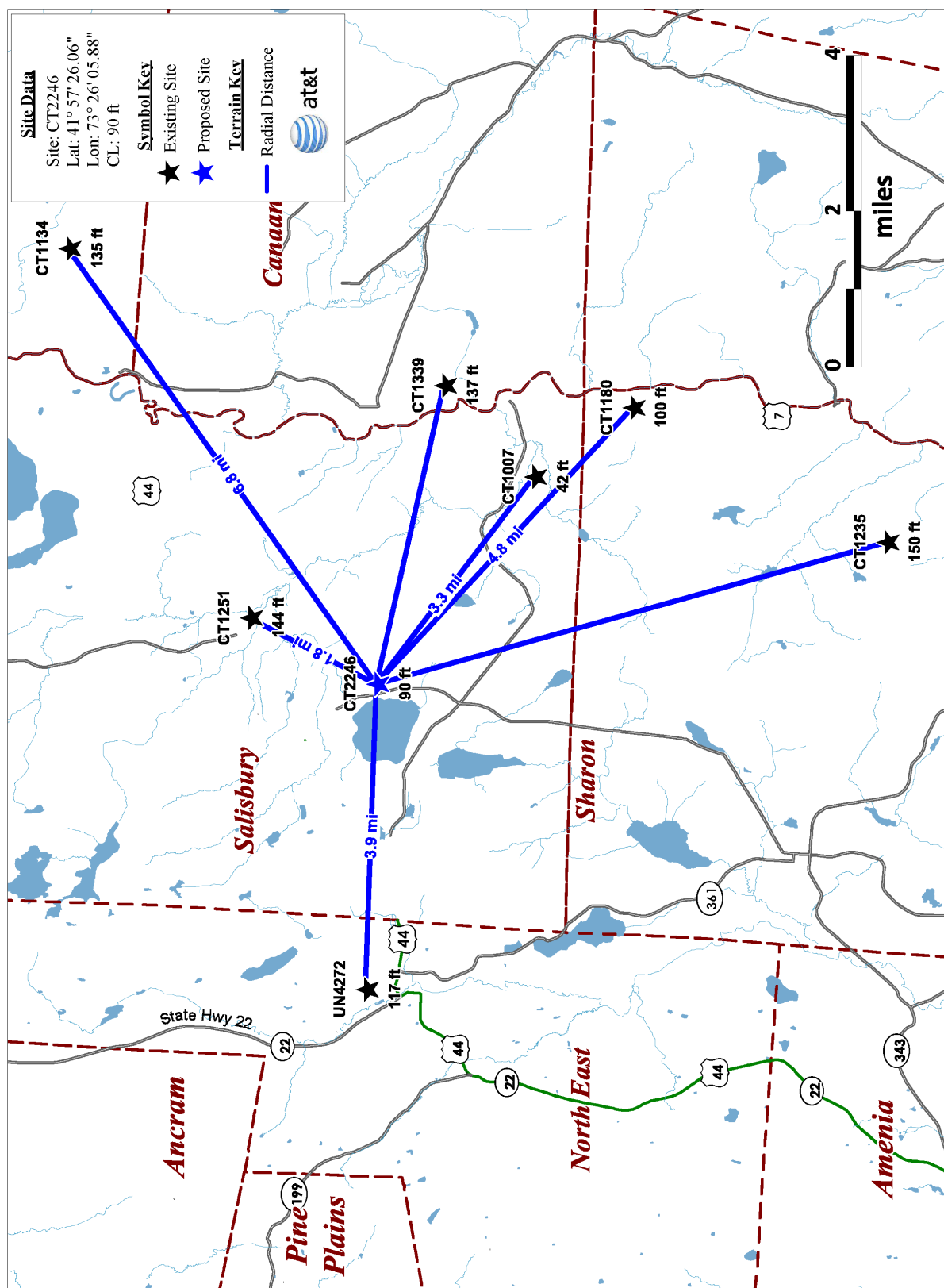
Attachment 2: "CT2246 Existing 700 MHz LTE Coverage with Proposed Site" for the AT&T Network

CT2246 - Area Terrain Map

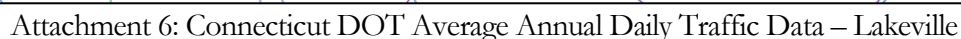


Attachment 3: Area Terrain Map

CT2246 - Neighbor Sites & Radial Distances



Attachment 4: Neighbor Sites & Radial Distances

Attachment 5: Neighbor Site Data

ATTACHMENT 2

AT&T

Site Search Summary

In general, a “site search area” is developed to initiate a site selection process in an area where a coverage need has been identified. The site search area is a general location where the installation of a wireless facility would address an identified coverage need while still allowing for orderly integration of the site into a network such as AT&T’s, based on the engineering criteria hand-off, frequency reuse and interference. In any site search area, the Applicant seeks to avoid the unnecessary proliferation of towers and to reduce the potential adverse environmental effects of a needed facility, while at the same time ensuring the quality of service provided by the site to users of its network.

The candidate identification process includes reviewing the applicable zoning ordinance to identify areas within which the proposed use is allowed. Viable candidates consist of existing structures of sufficient height from which an antenna installation can provide sufficient coverage, or lacking such a structure, parcels located within the narrowly defined search area upon which a tower may be constructed to a sufficient height. In order to be viable, a candidate must provide adequate coverage to the significant gap in AT&T’s network. In addition, all viable candidates must have a willing landowner with whom commercially reasonable lease terms may be negotiated. Preference is given to locations that closely comply with local zoning ordinances, or in the event no viable candidates are determined to be located within such areas, to identify other potentially suitable locations. In the case of this particular site search area in the Lakeville area of Salisbury, no tall, non-tower structures were located within the identified area of need that were available for leasing. The area consists of mainly residential/ agricultural parcels along with challenging topography.

Properties Investigated by AT&T

AT&T investigated four (4) different parcels of land within and near this area for construction of a new facility. Upon review of these sites by AT&T's radio frequency engineer, these sites were determined to be inadequate and did not provide the appropriate coverage and therefore were inappropriate for the siting of a facility or technically inadequate to satisfy AT&T's coverage requirements in this area of need. The four sites AT&T investigated are set forth below along as well as a map depicting the approximate location of the sites investigated.

A. 106 Sharon Road, Lakeville, CT

Map: 47 Lot: 2

Owner: Wake Robin, LLC

Zoning District: Rural Residence 1 ("RR-1") Zoning District

Parcel Size: 11.52 acres

Lat/Long: 41.9572395 N/ 73.4349678 W

Ground Elevation: 850 +/- AMSL

This property is the Candidate site.

B. 3232 Main Street, Lakeville, CT

Lat/Long: 41.97122 N/ 73.43454 W

AT&T RF Engineer rejected, the site does not provide appropriate coverage.

C. Bunker Hill Road, Salisbury, CT

Lat/Long: 42.001194 N/ 73.440000 W

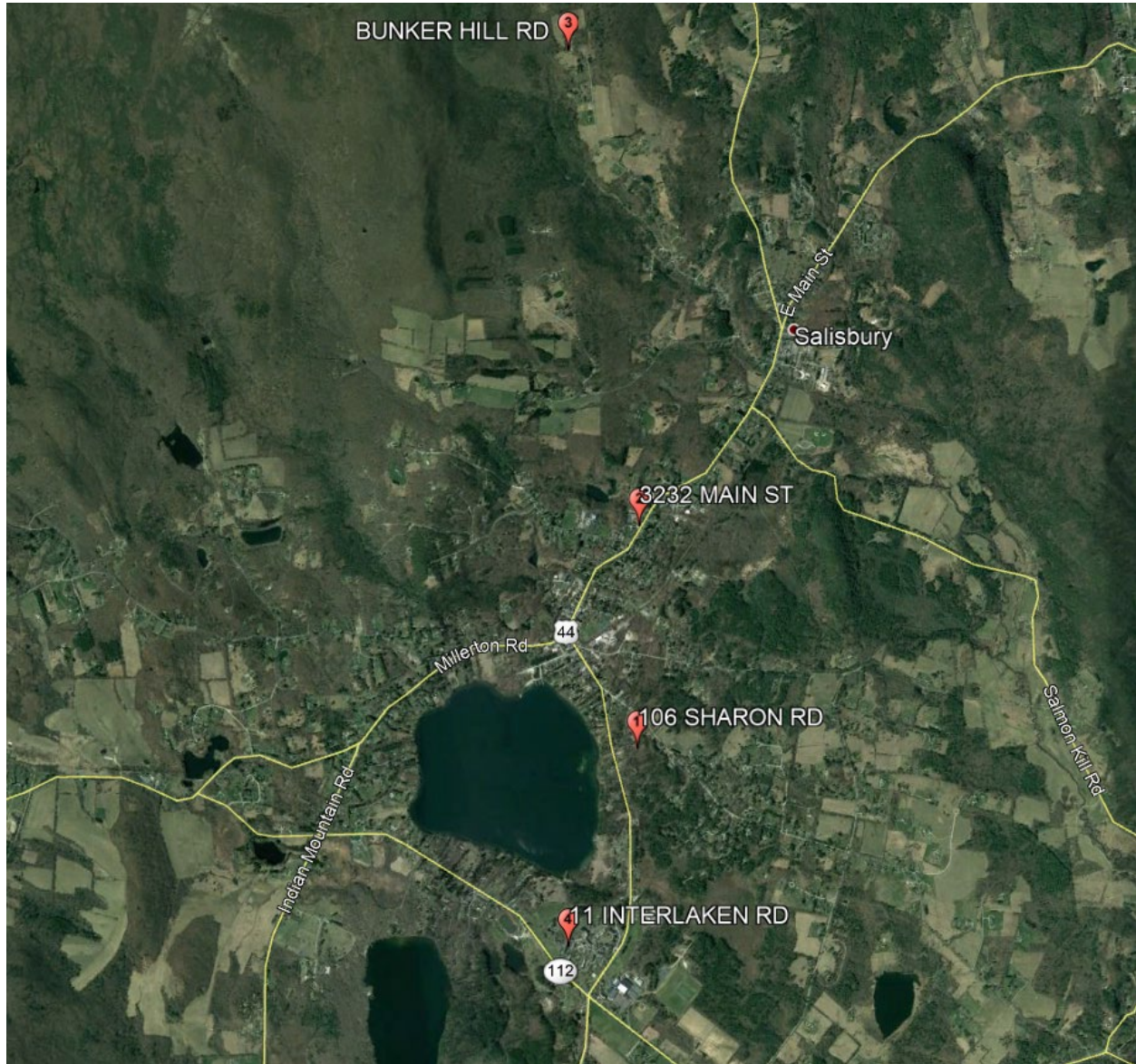
AT&T RF Engineer rejected, the site is too far to provide appropriate coverage.

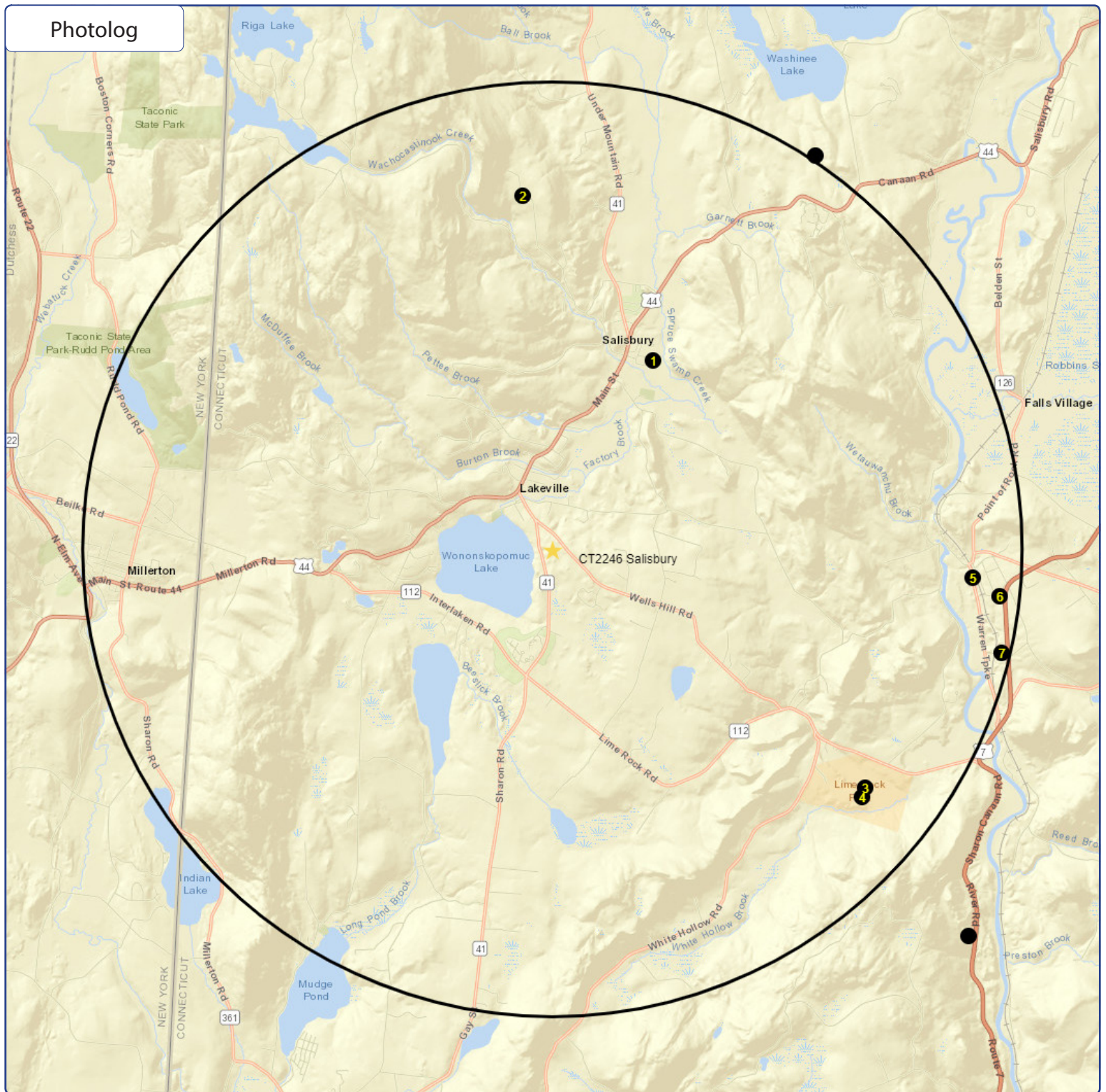
D. 11 Interlaken Road (Hotchkiss School), Lakeville, CT

Lat/Long: 41.94485 N/ 73.441017 W

AT&T RF Engineer rejected, the site is too far and too low to provide appropriate coverage.

Figure 1: Aerial Map of AT&T Search and Proposed Site





Existing Telecommunications Sites - 4 Mile Radius

CT2246 Salisbury
106 Sharon Rd
Salisbury, CT 06039



Proposed Site



4 Mile Radius



Existing Site Locations



Project Name: CT2246 Salisbury

GPS Location: Lat: 41.957203

Long: -73.434994

Existing Telecommunications Site Listing - 4 Mile Radius

CT2246 Salisbury
106 Sharon Rd
Salisbury, CT 06039

Project Name: CT2246 Salisbury
GPS Location: Lat: 41.957203
Long: -73.434994

Existing Towers

ID	NAME	ADDRESS	TOWN	LAT	LONG	HT	TYPE	CARRIERS	DIST
1	American Tower	52 Library Street	Salisbury	41.981	-73.418	150	monopole	AT&T @153' T-Mobile@123' Verizon@134'	1.84
2	TCI	Bunker Hill Road/Lion's Head	Salisbury	42.001	-73.44	80	self-supporting lattice	haystack catv @ ?	3.04
3		497 Lime Rock Race Track	Salisbury	41.928	-73.383	0	tele. Pole w/ antennas	AT&T @53'	3.36
4	Lime Rock Park LLC	497 Lime Rock Road	Salisbury	41.927	-73.384	30	monopole	Verizon@30'	3.39
5	Falls Village Vol. Fire Dept.	35 Railroad Street	Canaan	41.954	-73.365	23	pole		3.59
6	Town of Canaan	100 Railroad Street	Canaan	41.952	-73.361	38	pole		3.83
7	Verizon	188 Route 7 South (Falls Village)	Canaan	41.945	-73.36	150	Monopine	Verizon @150' AT&T@140'	3.93



ATTACHMENT 3

General Facility Description

106 Sharon Road, Lakeville, Connecticut

Tax/PIN Identification: Map: 47 Lot: 2

11.52 Acre Parcel

The proposed tower site is located on an approximately 11.52-acre parcel located at 106 Sharon Road owned by Wake Robin, LLC. It is classified in the Rural Residence 1 ("RR-1") Zoning District and the property is the site of the Wake Robin Inn, a private seasonal inn. The proposed telecommunications facility includes an approximately 10,000 s.f. lease area located in the south-central section of the host Parcel. The facility consists of a new self-supporting monopole that is approximately 94' in height with a lightning rod extending an additional 6' above the top of the pole, bringing the total height to approximately 100'. AT&T would install up to nine (9) panel antennas and related equipment at a centerline height of 90' above grade level (AGL). The tower would be designed for future shared use of the structure by other FCC licensed wireless carriers. AT&T's walk-in equipment cabinet would be installed on a concrete pad within the 50' x 50' fenced tower compound area at the base of the monopole. AT&T would also install emergency backup power generator on a concrete pad within the equipment compound.

The tower compound would consist of a 2,500 s.f area to accommodate AT&T's equipment and provide for future shared use of the facility by other carriers. The tower compound would be enclosed by an eight (8)-foot high chain link fence. Vehicle access to the facility would be provided from Sharon Road using an existing paved driveway and an existing gravel access way, which will connect to a proposed 12-foot wide approximately 231-foot long gravel driveway on the western portion of the property to the proposed compound. Utility connections would be routed underground along the proposed access road and existing driveway to Sharon Road.

SITE EVALUATION REPORT

SALISBURY CT2246

I. LOCATION

- A. COORDINATES: 41.9572395 N/ 73.4349678 W
- B. GROUND ELEVATION: 850'± AMSL
- C. SITE ADDRESS: 106 Sharon Road, Lakeville, CT 06039
- D. ZONING WITHIN ¼ MILE OF SITE: The site is classified in the Rural Residence 1 ("RR-1") Zoning District. Land further north of the site toward the center of Lakeville is classified in the Residence 20 ("R20"), Commercial ("C20") and Residence 10 ("R10") Zoning Districts.

II. DESCRIPTION

- A. SITE SIZE: 11.52 Acres
LEASE AREA/COMPOUND AREA: 10,000 SF/2,500 SF
- B. TOWER TYPE/HEIGHT: 94' Monopole (100' total with lightening rod)
- C. SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER: The proposed compound is located within an existing forested area along the south-central portion of the property. To the south are forested areas and residential houses, to the east are farmlands and rural residences, and to the west and north are mainly residential areas. There are on-site wetlands located over 100 feet to the east of the proposed compound and within 100 feet of the existing driveway, to the northwest of the proposed compound.
- E. LAND USE WITHIN ¼ MILE OF SITE: Residential properties to the north, south, east and west. The Wononskupomuc Lake is approximately 0.18 miles to the west. The Saint Mary's Catholic Church is approximately 0.25 miles to the northwest.

III. FACILITIES

- A. VEHICLE ACCESS TO SITE: Access to the proposed telecommunication facility will be along an existing paved driveway and an existing gravel access way, which will connect to a proposed 12-foot wide approximately 231-foot long gravel driveway on the western portion of the property to the proposed compound.
- B. UTILITY CONNECTIONS: Utilities would be routed underground along the proposed access road and existing driveway to Sharon Road.
- C. OBSTRUCTION: None.
- D. CLEARING AND FILL REQUIRED: Total area of disturbance is approximately 22,765 sf.; approximately 29 trees will need to be removed.

IV. LEGAL

- A. PURCHASE [] LEASE [X]
- B. OWNER: Wake Robin, LLC
- C. ADDRESS: P.O. Box 660, Lakeville, CT 06039
- D. DEED ON FILE AT: Book 184 - Page 509

Facilities and Equipment Specification

I. TOWER SPECIFICATIONS:

- A. MANUFACTURER: To be determined
- B. TYPE: Self-Supporting monopole tower
- C. HEIGHT: 94' AGL (with 6' lightning rod extending to 100')
- DIMENSIONS: Tower structure tapered
- D. TOWER LIGHTING: None required.

II. TOWER LOADING:

- A. AT&T - up to 9 panel antennas
 - a. Model - TBD
 - b. Antenna Dimensions - approximately:
 - 96"H x 21"W x 6.3"D; and
 - 96"H x 11.7"W x 7.6"D
 - c. Position on Tower - 90' centerline AGL
 - d. Transmission Lines - DC and Fiber lines internal to tower.
 - e. Up to 18 Remote Radio Units on proposed antenna mounts
- B. Future Carriers - To be determined

III. ENGINEERING ANALYSIS AND CERTIFICATION:

The tower will be designed in accordance with American National Standards Institute TIA/EIA-222-G "Structural Standards for Steel Antenna Towers and Antenna Support Structures" and the 2012 International Building Code with 2016 Building Code Amendment. The foundation design would be based on soil conditions at the site. The details of the tower and foundation design will be provided as part of the final D&M plan.

Site Impact Statement

Site: Salisbury CT2246
Site Address: 106 Sharon Road
Lakeville, CT 06039

Access distances:

The existing paved driveway and gravel access way will connect to a proposed 12-foot wide approximately 231-foot long gravel driveway on the western portion of the property to the proposed compound.

Distance to Nearest Wetlands:

Wetland A: Greater than 100' to the east of the proposed compound
Wetland B: Within 100 feet to the west of the existing gravel and paved parking lot

Distance to Property Lines:

377 +/- to the northern property boundary from the tower
140 +/- to the southern property boundary from the tower
308 +/- to the western property boundary from the tower
210 +/- to the eastern property boundary from the tower

Residence Information:

There are 26 single family residences within 1,000 feet of the proposed facility. The closest residence is located approximately 380 feet to the east of the proposed tower compound.

Earthwork Required:

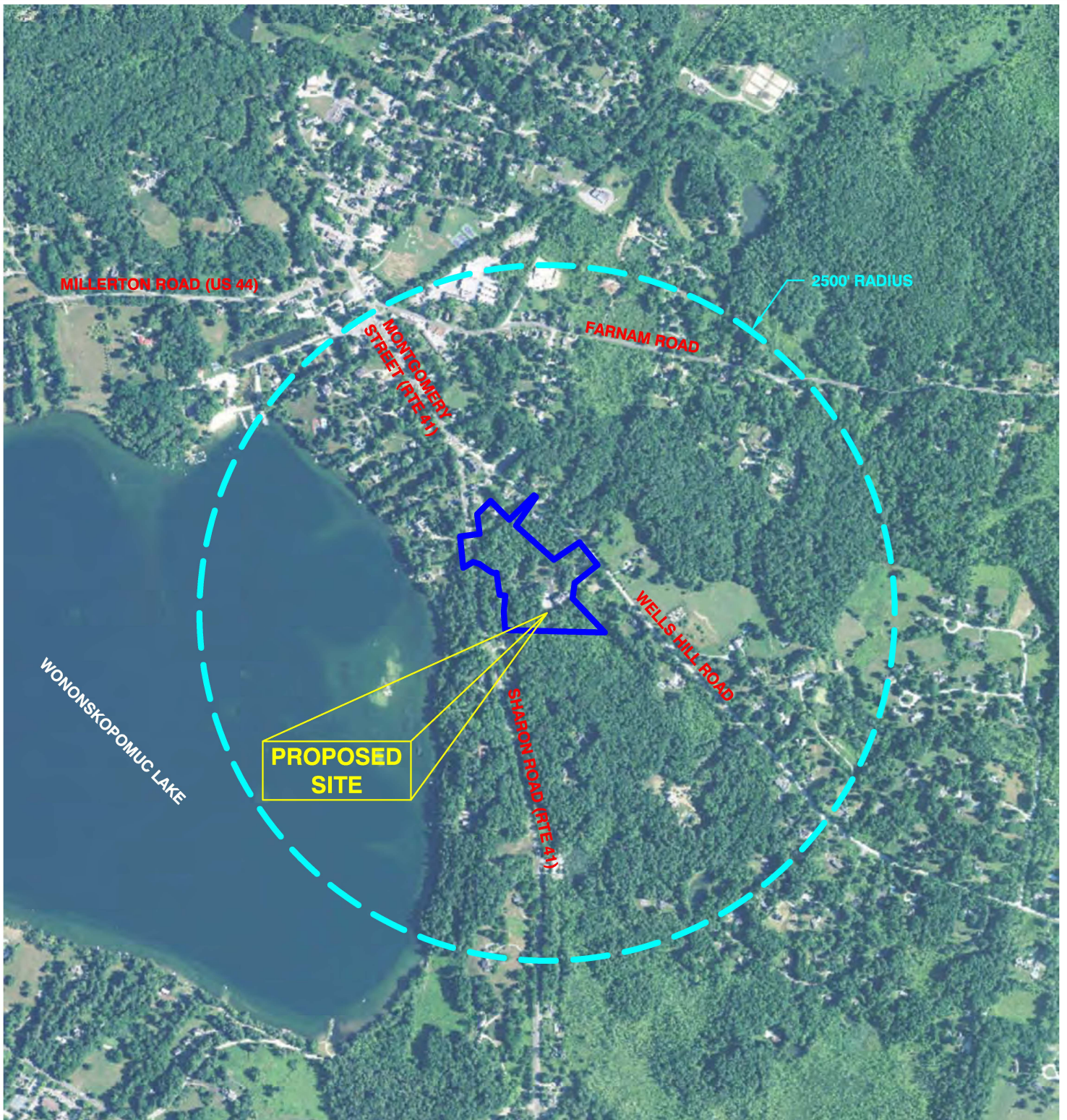
The proposed site has suitable access but clearing and earthwork will be required to improve the access route and to construct the compound area. Installation of the proposed compound area and access driveway improvements will require removal of 29 trees. The total area of clearing and grading disturbance will be approximately 22,765 SF.

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")**SALISBURY – 106 Sharon Road****1000' RESIDENTIAL BUILDING LIST**

(Information gathered from Town of Salisbury Assessor, Map 47)

PARCEL ID	STREET ADDRESS	BUILDING TYPE
Map 47 Lot 1	77 Wells Hill Road	Single Family
Map 47 Lot 2	104+106 Sharon Road	Single Family
Map 47 Lot 2-1	53 Wells Hill Road	Single Family
Map 47 Lot 3	33 Wells Hill Road	Single Family
Map 47 Lot 4	25 Wells Hill Road	Single Family
Map 47 Lot 5	21 Wells Hill Road	Single Family
Map 47 Lot 6	70+76+80 Sharon Road	Single Family
Map 47 Lot 7	86 Sharon Road	Single Family
Map 47 Lot 8	90 Sharon Road	Single Family
Map 47 Lot 9	110 Sharon Road	Single Family
Map 47 Lot 10	126 Sharon Road	Single Family
Map 47 Lot 11	Sharon Road	Single Family
Map 47 Lot 12	123 Sharon Road	Single Family
Map 47 Lot 13	117 Sharon Road	Single Family
Map 47 Lot 14	Sharon Road	Single Family
Map 47 Lot 15	95 Sharon Road	Single Family
Map 47 Lot 15-1	97 Sharon Road	Single Family
Map 47 Lot 15-2	Sharon Road	Single Family
Map 47 Lot 16	83 Sharon Road	Single Family
Map 47 Lot 16-1	93 Sharon Road	Single Family
Map 47 Lot 46	Wells Hill Road	Single Family
Map 47 Lot 47	22 Wells Hill Road	Single Family
Map 47 Lot 48	28 Wells Hill Road	Single Family
Map 47 Lot 49	34 Wells Hill Road	Single Family
Map 47 Lot 51	40 Wells Hill Road	Single Family
Map 47 Lot 52	50 Wells Hill Road	Single Family
Map 47 Lot 53	64 Wells Hill Road	Single Family

ATTACHMENT 4



AERIAL PHOTO

SCALE: 1"=1000'

ProTerra
DESIGN GROUP, LLC

4 Bay Road, Bldg. A
Suite 200
Hadley, MA 01035
Ph: (413) 320-4918

LOCATION PLANS

SITE NUMBER: CT2246

SITE NAME: SALISBURY

ADDRESS: 106 SHARON ROAD
LAKEVILLE, CT 06039



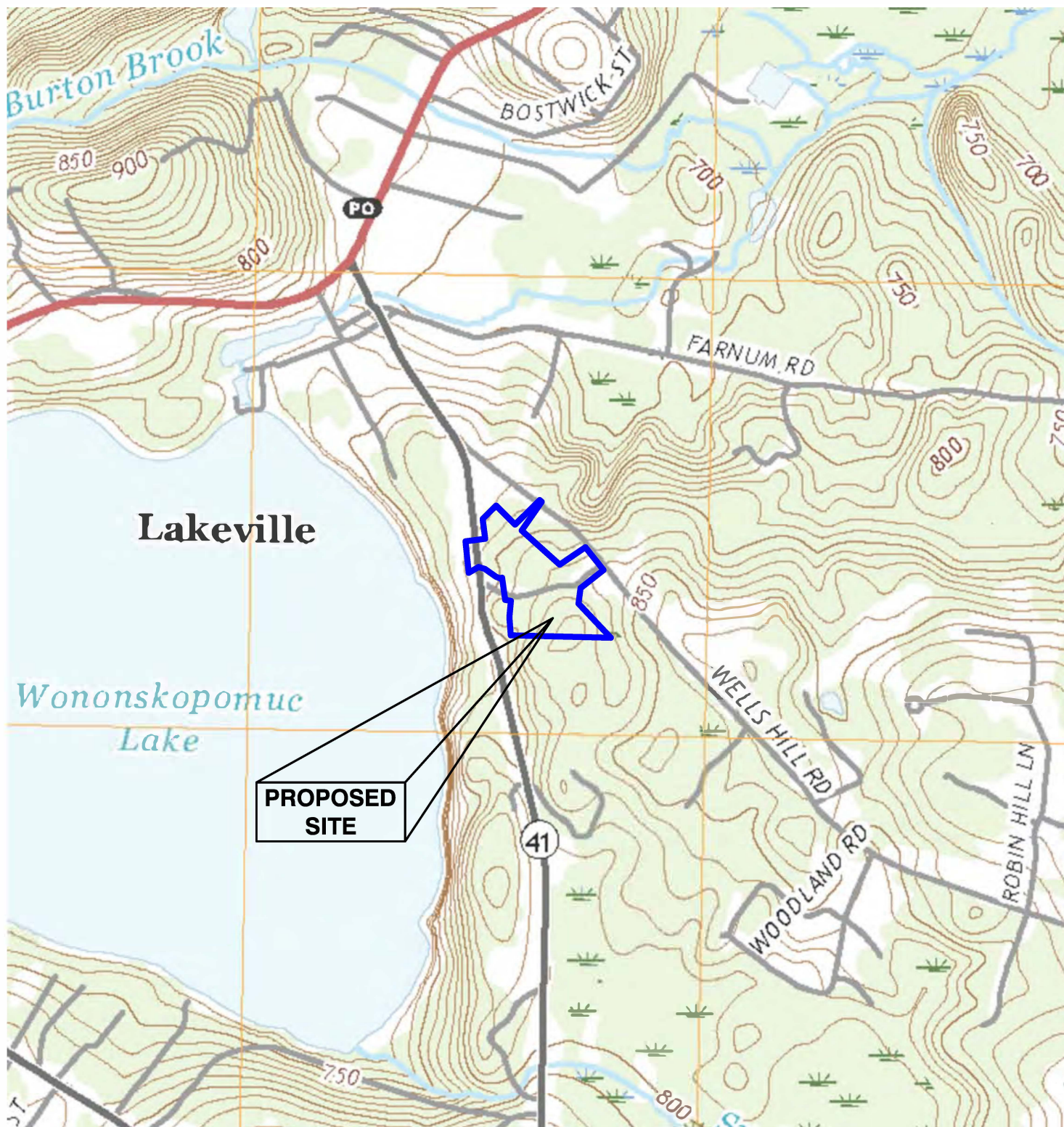
NEW CINGULAR
WIRELESS PCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

DATE: 02/26/19

REVISION: A

JOB NO.: 18-063

SHEET: M-1



USGS MAP

SCALE: 1"=1000'

ProTerra
DESIGN GROUP, LLC

4 Bay Road, Bldg. A
Suite 200
Hadley, MA 01035

Ph: (413) 320-4918

LOCATION PLANS

SITE NUMBER: CT2246

SITE NAME: SALISBURY

ADDRESS: 106 SHARON ROAD
LAKEVILLE, CT 06039



NEW CINGULAR
WIRELESS PCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

DATE: 02/26/19

REVISION: A

JOB NO.: 18-063

SHEET: M-2



ProTerra
DESIGN GROUP, LLC

4 Bay Road
Bldg A; Suite 200
Hadley, MA 01035

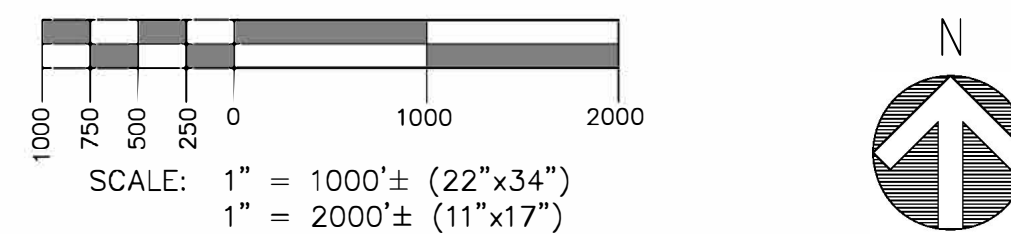
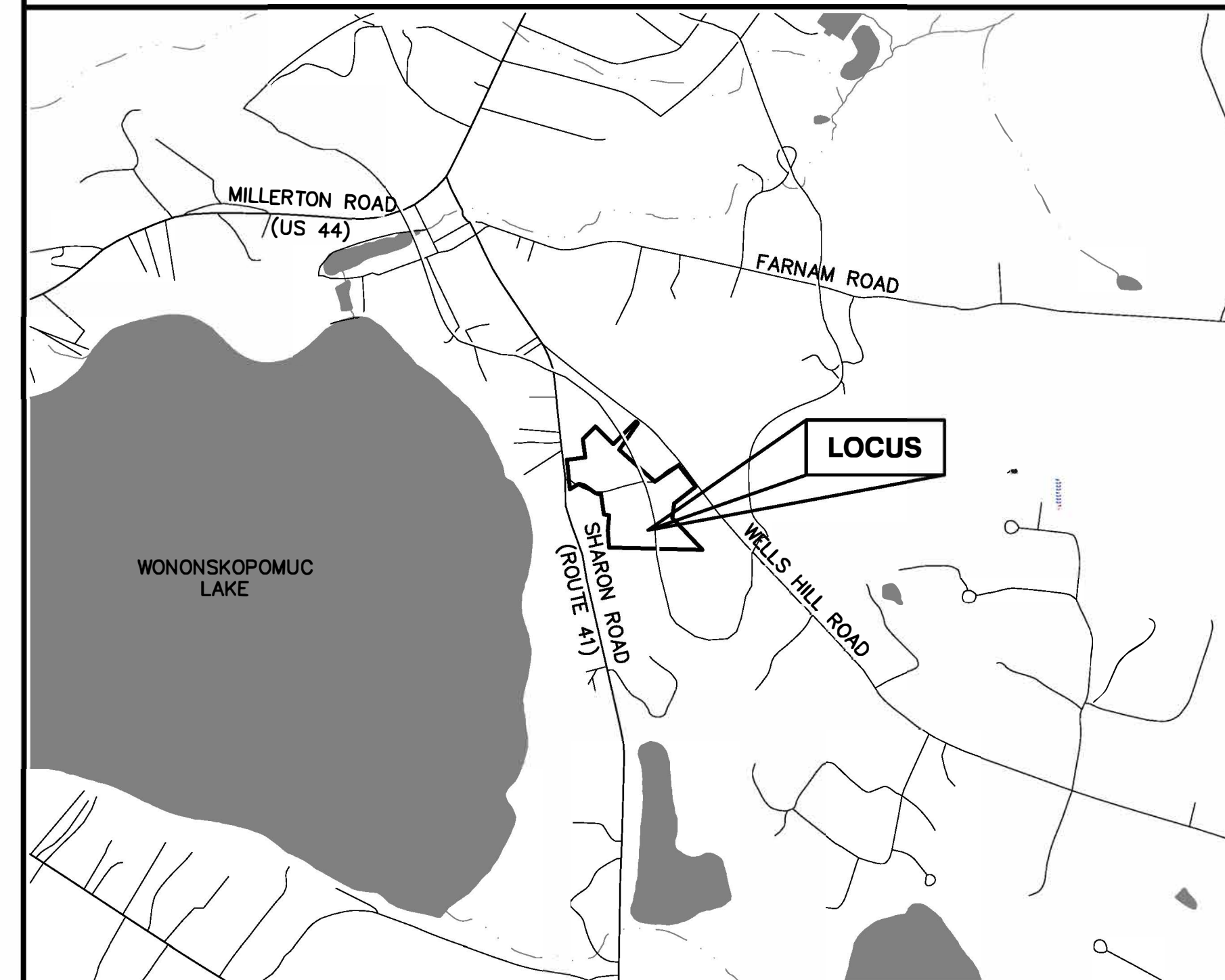
Ph: (413)320-4918

NO.	DATE	REVISIONS
0	06/19/19	ISSUED FOR REVIEW
1	02/21/20	FOR PERMITTING
2	02/21/20	REVISED PERMITTING
3	05/12/20	REVISED PERMITTING
4	10/26/20	REVISED PERMITTING
5	11/03/20	REVISED PERMITTING
6	02/03/21	REVISED PERMITTING

DRAWING INDEX

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER & AT&T REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
2. PLANS FOR PERMITTING PURPOSES ONLY. NOT FOR CONSTRUCTION.
3. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH AT&T CONSTRUCTION GUIDELINES.
4. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL DIG-SAFE (888) 344-7233 72-HOURS PRIOR TO ANY EXCAVATION.
5. THIS SHEET SET WAS ORIGINALLY PRINTED TO ANSI D (22"x34") WITH 1" MARGINS. PRINTING TO ANSI B (11"x17") WILL RESULT IN A HALF-SCALE (1:2) SHEET SET WITH 1/2" MARGINS. CONFIRM ALL SCALED DISTANCES WITH GRAPHICAL SCALES SHOWN HEREIN.




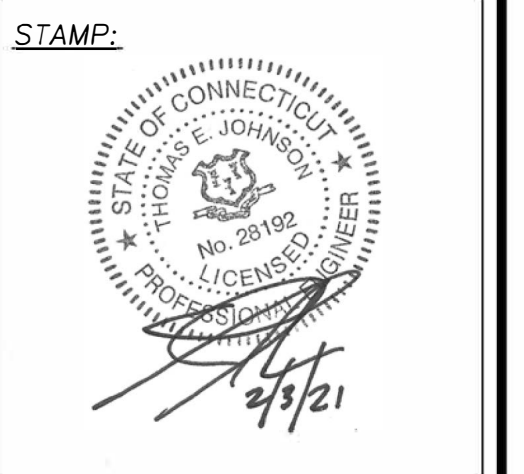
SITE TYPE:	RAW LAND
SCOPE OF WORK:	PROPOSED 94' TALL MONOPOLE, (PAINTED BROWN) WITHIN 50'x50' FENCED COMPOUND AND 100'x100' LEASE AREA
SITE NAME:	SALISBURY
SITE NUMBER:	CT2246
SITE ADDRESS:	106 SHARON ROAD LAKEVILLE, CT 06039
ASSESSOR'S TAX ID#:	MAP 47; LOT 2
ZONING DISTRICT:	RURAL RESIDENCE (RR-1)
LATITUDE:	41° 57' 26.06"± N (SURVEY 1A)
LONGITUDE:	73° 26' <u>05.88"±</u> W (SURVEY 1A)
(P) GRADE:	850.0'±
DATUM:	NAD83/NAVD88
PROPERTY OWNER:	N/F WAKE ROBIN, LLC P.O. BOX 660 LAKEVILLE, CT 06039
APPLICANT:	NEW CINGULAR WIRELESS PCS, LLC "AT&T" 500 ENTERPRISE DRIVE ROCKY HILL, CT 06067
SITE ENGINEER:	PRO TERRA DESIGN GROUP, LLC 4 BAY ROAD BLDG A; SUITE 200 HADLEY, MA 01035 (413) 320-4918
SURVEYOR:	NORTHEAST SURVEY CONSULTANTS 116 PLEASANT STREET SUITE 302 P.O. BOX 109 EASTHAMPTON, MA 01027 (413) 203-5144

SITE NAME: SALISBURY
SITE NUMBER: CT2246
ADDRESS: 106 SHARON ROAD
LAKEVILLE, CT 06039

NEW CINCULAR
WIRELESS PCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

APPLICANT:

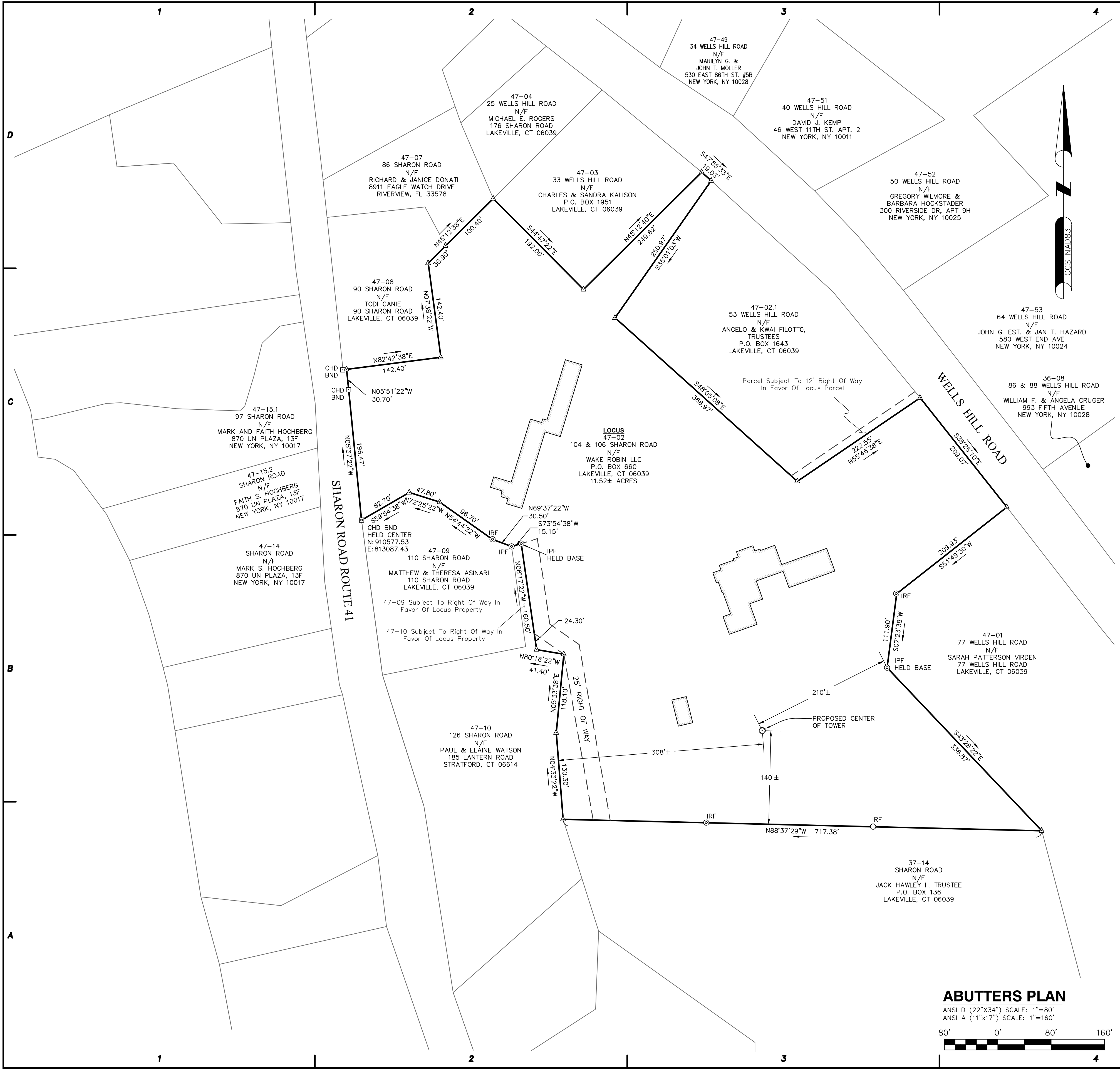
 **at&t**



DATE:	02/03/21
DRAWN:	BLM
CHECK:	JMM/TEJ
SCALE:	SEE PLAN
JOB NO.:	18-063
SHEET TITLE:	

TITLE SHEET

T-1



LEGEND

- N/F - NOW OR FORMERLY
- 47-02 - ASSESSOR'S MAP-LOT
- - TOWER CONTROL POINT
- IPF/IRFO - IRON PIPE/IRON ROD FOUND
- - CONCRETE BOUND FOUND
- △ - CALCULATED POINT
- ⚡ - UTILITY POLE
- - LOCUS BOUNDARY
- - ABUTTERS LINE
- - - - - EASEMENT LINE

SURVEY NOTES

1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300B-1 THROUGH 20-300B-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS INC. ON SEPTEMBER 26, 1997.

TYPE OF SURVEY: IMPROVEMENT LOCATION SURVEY

BOUNDARY SURVEY CATEGORY: DEPENDENT SURVEY

CLASS OF ACCURACY: HORIZONTAL CLASS D
 TOPOGRAPHIC CLASS T-2
 VERTICAL CLASS V-2

PURPOSE OF SURVEY: PROPOSED CELLULAR TOWER
2. PROPERTY LINES SHOWN HEREON ARE FROM RECORD DEEDS, PLOTS, AND TAX MAPS AS OVERLAID ON ANY MONUMENTATION OR OTHER EVIDENCE THAT MAY HAVE BEEN LOCATED DURING THE TOPOGRAPHIC SURVEY. A PROPERTY LINE SURVEY WAS NOT PERFORMED BY PROTERRA DESIGN GROUP, LLC OR ITS AFFILIATES AND SUBCONTRACTORS AND AS A RESULT THE PROPERTY LINES SHOWN ARE APPROXIMATE AND DO NOT PRESENT A PROPERTY/ BOUNDARY OPINION.
3. HORIZONTAL DATUM IS GRID NORTH AS DETERMINED BY THE CONNECTICUT STATE PLANE COORDINATE SYSTEM AND IS BASED UPON GPS OBSERVATIONS TAKEN AT THE TIME OF SURVEY.
4. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND/OR EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: CALL BEFORE YOU DIG: 1-800-922-4455
5. THE SURVEY PLAN IS SUBJECT TO ANY STATEMENT OF FACTS THAT AN UP-TO-DATE ABSTRACT OF TITLE WOULD DISCLOSE.
6. SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS, OR RESTRICTIONS OF RECORD.
7. THE LOCUS PARCEL AND ALL ADJOINING PARCELS ARE LOCATED IN THE VILLAGE OF LAKEVILLE, TOWN OF SALISBURY, CT. ZONE "RR-1" RURAL RESIDENTIAL DISTRICT.
8. LATITUDE/LONGITUDE/ELEVATIONS WERE OBTAINED UTILIZING RTK GPS AND KEYNET CORRECTIONS. LATITUDE/LONGITUDE ARE REFERENCE TO NAD83 CONNECTICUT ZONE COORDINATES SHOWN. IF ANY ARE EXPRESSED IN U.S. SURVEY FEET, ELEVATIONS ARE REFERENCED TO NAVD88. TOP OF STRUCTURE HEIGHT, IF ANY, IS DETERMINED BY VERTICAL ANGLE OR BY ACTUAL LOCATION INFORMATION BASED UPON A FAA 1A CERTIFICATION ACCURACY LEVEL AS DEFINED:

HORIZONTAL ±20 FEET/6m

VERTICAL ± 3 FEET/1m
9. THE PROJECT AREA IS LOCATED IN FLOOD ZONE "X" (AREAS OF MINIMAL FLOODING. NO SHADING) AS SHOWN ON FLOOD INSURANCE RATE MAP FOR THE TOWN OF SALISBURY: COMMUNITY PANEL NUMBER 090052 0018 B, EFFECTIVE 1-5-1989.
10. WETLANDS DELINEATION WAS PERFORMED BY LUCAS ENVIRONMENTAL, LLC ON 11-8-2018.

PROPERTY OWNER: WAKE ROBIN LLC
P.O. BOX 660
LAKEVILLE, CT 06039

LOCUS DEED REF.: DEED BOOK 184, PAGE 509

LOCUS PLAN REF: PLANS:SALISBURY LAND RECORDS 740 & 264

THIS DOCUMENT AND COPIES THEREOF ARE VALID ONLY IF THEY BEAR THE LIVE SIGNATURE AND EMBOSSED SEAL OF THE DESIGNATED PROFESSIONAL. UNAUTHORIZED ALTERATIONS RENDER ANY DECLARATION NULL AND VOID.

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

Charles G. Gidman
CHARLES G. GIDMAN, P.L.S.

#70103

ABUTTERS PLAN

ANSI D (22"x34") SCALE: 1"=80'
ANSI A (11"x17") SCALE: 1"=160'



ProTerra
DESIGN GROUP, LLC

4 Bay Road
Bldg A, Suite 200
Hadley, MA 01035
Ph: (413)320-4918

CONSULTANTS:
NORTHEAST SURVEY
CONSULTANTS

116 Pleasant St. Ste. 302
P.O. Box 109
Easthampton, MA 01027
(413) 203-5144
northeastsurvey.com

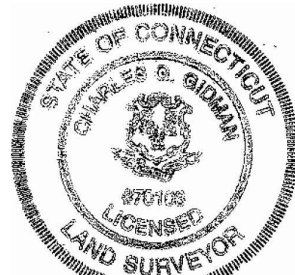
NO.	DATE	REVISIONS
1	12/7/18	ISSUED FOR REVIEW
2	04/24/19	MOVE TOWER
3	06/10/19	ADD TITLE NOTES
4	09/05/19	ADD COORDINATES
5	10/11/19	REMOVE TITLE NOTES
6	02/03/21	UPDATE ABUTTERS

SITE NAME:
SITE NUMBER:
ADDRESS: 104 & 106 SHARON ROAD
LAKEVILLE, CT 06039

NEW CIRCULAR
WIRELESS PCS, LLC
("AT&T")
560 COCHITUATE ROAD
FRAMINGHAM, MA 01701

at&t

STAMP:

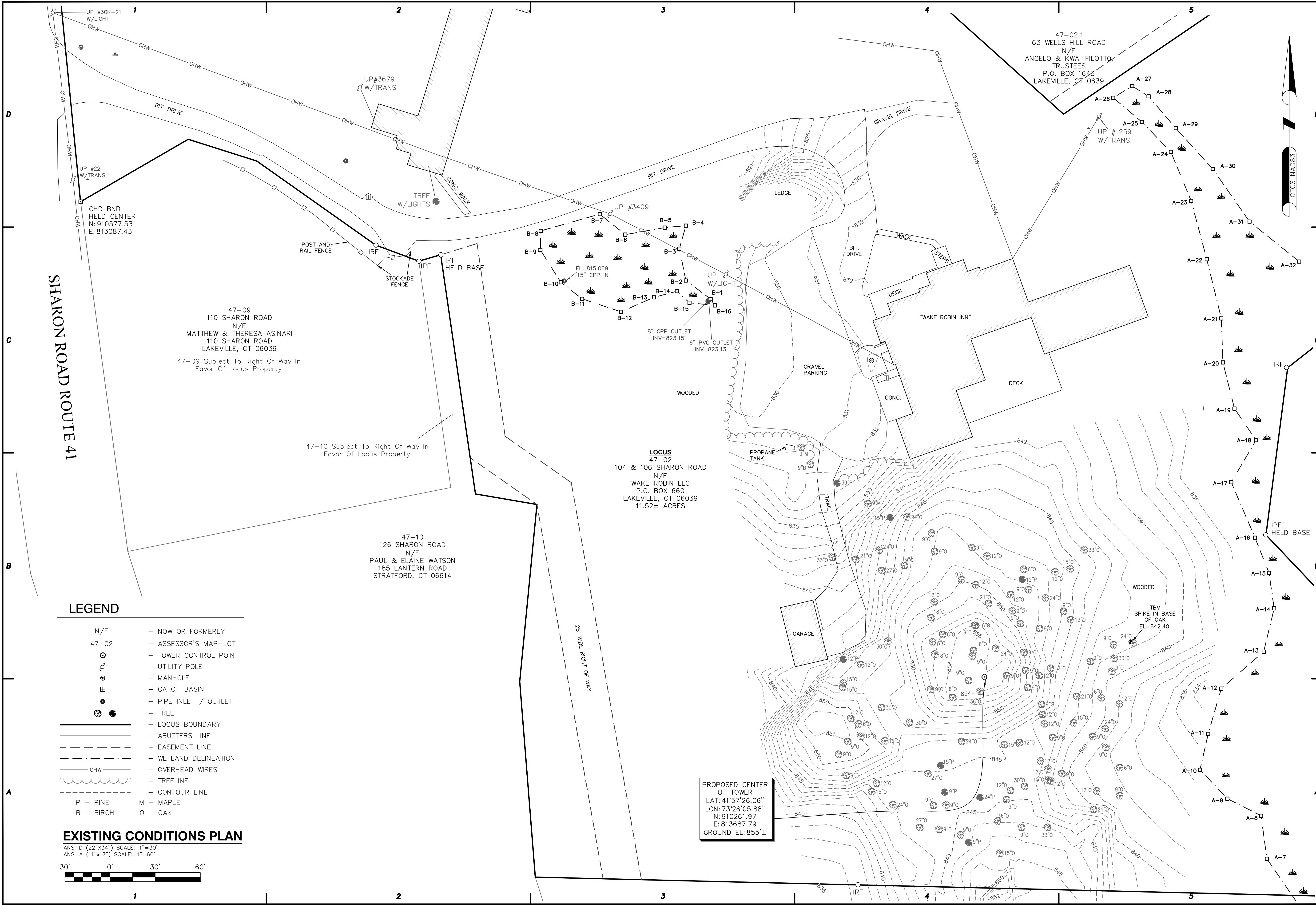


DATE: 02/03/2021
DRAWN: JDG BCF
CHECK: BCF CGG
SCALE: 1"=80'
JOB NO.: 18-317.1

SHEET TITLE:

ABUTTERS PLAN

C-1



LEGEND

- N/F

47-02

P - PINE

M - MAPLE

B - BIRCH

O - OAK
- NOW OR FORMERLY

- ASSESSOR'S MAP-LOT

- TOWER CONTROL POINT

- UTILITY POLE

- MANHOLE

- CATCH BASIN

- PIPE INLET / OUTLET

- TREE

- LOCUS BOUNDARY

- ABUTTERS LINE

- EASEMENT LINE

- WETLAND DELINEATION

- OVERHEAD WIRES

- TREELINE

- CONTOUR LINE

EXISTING CONDITIONS PLAN

ANSI D (22"x34") SCALE: 1"=30'
ANSI A (11"x17") SCALE: 1"=60'



ProTerra
DESIGN GROUP, LLC

4 Bay Road
Bldg A, Suite 200
Hadley, MA 01035
Ph: (413)320-4918

CONSULTANTS:
NORTHEAST SURVEY
CONSULTANTS

116 Pleasant St. Ste. 302
P.O. Box 109
Easthampton, MA 01027
(413) 203-5144
northeastsurvey.com

NO.	DATE	REVISIONS
A	12/7/18	ISSUED FOR REVIEW
1	04/24/19	MOVE TOWER
2	06/10/19	ADD TITLE NOTES
3	09/05/19	ADD COORDINATES
4	10/11/19	REMOVE TITLE NOTES
5	02/03/21	UPDATE ABUTTERS

SITE NAME:
SITE NUMBER:
ADDRESS: 104 & 106 SHARON ROAD
LAKEVILLE, CT 06039

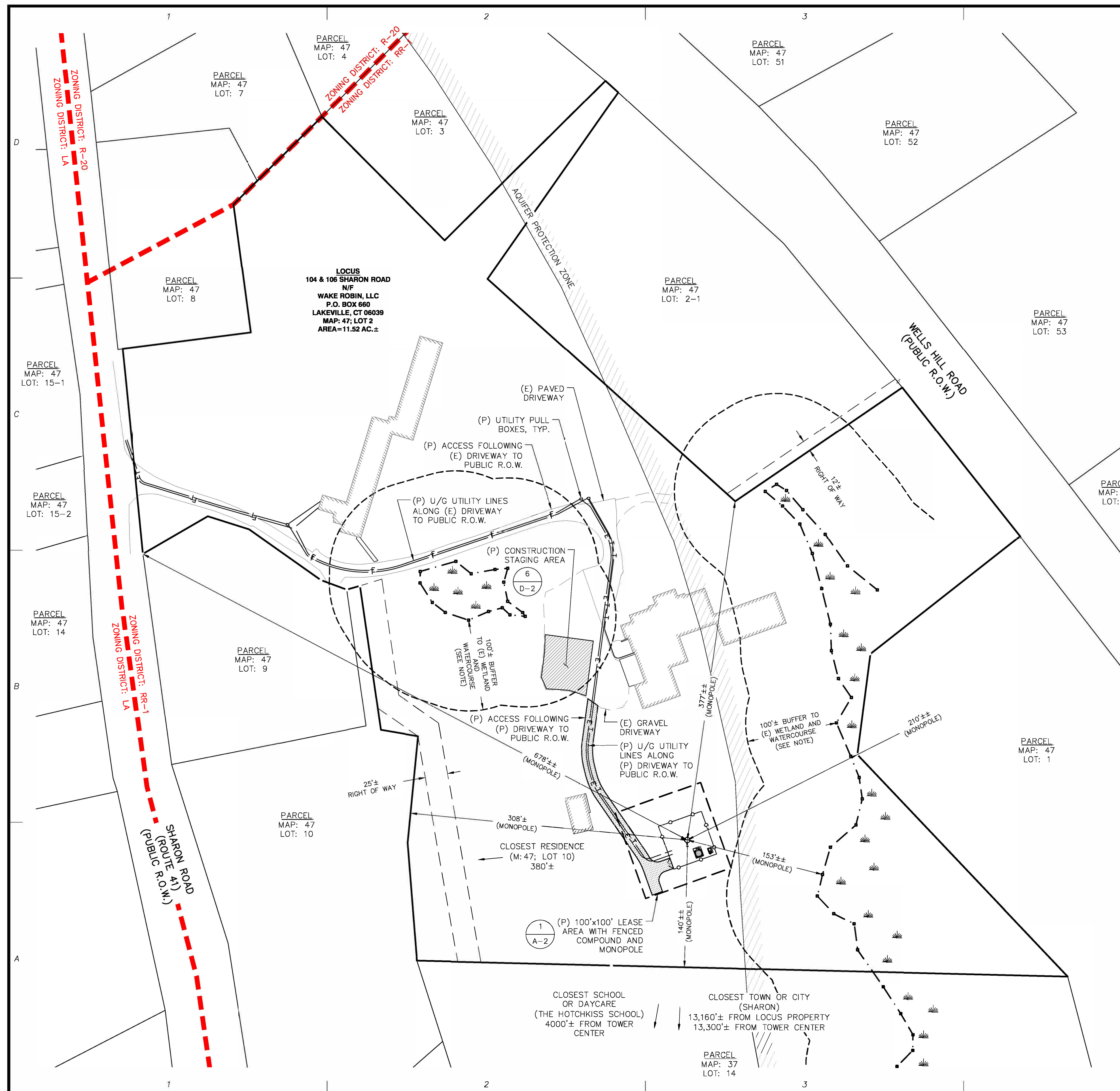
NEW CINGULAR
WIRELESS PCS, LLC
("AT&T")
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

TITLE:

APPLICANT:

DATE: 02/05/2021
DRAWN: JDG
CHECK: BCF CGG
SCALE: 1"=30'
JOB NO.: 18-317.1

SHEET TITLE:
**EXISTING
CONDITIONS**
C-2



GENERAL NOTES

1. THE TYPE, DIMENSIONS, MOUNTING HARDWARE, AND POSITIONS OF ALL PROJECT OWNER'S EQUIPMENT ARE SHOWN IN ILLUSTRATIVE FASHION. THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION. ACTUAL HARDWARE DETAILS AND FINAL LOCATIONS MAY DIFFER SLIGHTLY FROM WHAT IS SHOWN.
2. THE PROJECT OWNER'S PCS FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSIBLE BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE, AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT COVERED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. THE DESIGN OF THE TOWER, FOUNDATION AND ANTENNA MOUNTING HARDWARE WILL MEET THE ANSI/EIA/TIA-222 STANDARDS FOR STRUCTURAL STEEL ANTENNA SUPPORTING STRUCTURES AND STATE BUILDING CODE REQUIREMENTS. DETAILED CONSTRUCTION DRAWINGS AND STRUCTURAL CALCULATIONS WILL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER AND SUBMITTED WITH A BUILDING PERMIT APPLICATION FOR REVIEW AND APPROVAL BY THE LOCAL BUILDING CODE ENFORCEMENT OFFICIAL.
4. ONCE THE FACILITY BECOMES FULLY OPERATIONAL, NORMAL AND ROUTINE MAINTENANCE BY TOWER OWNER'S AND CARRIER'S TECHNICIANS WILL BE PERFORMED. THE ESTIMATED VEHICULAR TRAFFIC GENERATED BY THESE VISITS IS PREDICTED TO BE LESS THAN THE TYPICAL TRAFFIC GENERATED BY A SINGLE-FAMILY DWELLING.

REFERENCES

PROPERTY LINE, TOPOGRAPHY AND EXISTING FEATURES - SEE SHEETS C-1 AND C-2
PREPARED BY NORTHEAST SURVEY CONSULTANTS. A PROPERTY LINE AND/OR
BOUNDARY RE-TRACEMENT HAS NOT BEEN PERFORMED. A A-2 SURVEY MAY BE
REQUIRED PER CSC APPLICATION REVIEW.

ZONING DISTRICTS – TOWN OF SALISBURY, LAKEVILLE VILLAGE ZONING MAP NO. 3 DATED
SEPTEMBER 4, 2007.

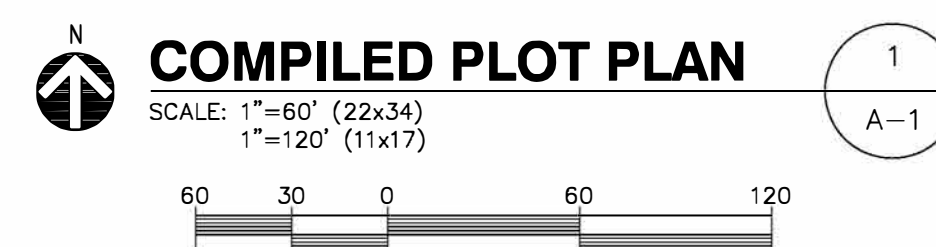
FLOODPLAIN - FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 0900520018B EFFECTIVE DATE JANUARY 5, 1989 PREPARED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), US DEPARTMENT OF HOMELAND SECURITY. ENTIRE AREA SHOWN IS WITHIN ZONE "X" UNSHADED: AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN.

CSC DIMENSIONS

ASSESSORS ID: MAP 47; LOT 2
(P) USE: WIRELESS COMMUNICATION FACILITY

MONOPOLE HEIGHT (HIGHEST APPURTENANCE)	94'± (100'±)
EXISTING SITE ACCESS LENGTH	750'±
PROPOSED SITE ACCESS LENGTH	231'±
NUMBER OF TREES OVER 6" DBH TO BE REMOVED	29
NUMBER OF TREES OVER 14" DBH TO BE REMOVED	10 (INCLUDED IN THE 29 TOTAL NUMBER OF TREES OVER 6" TO BE REMOVED)
NUMBER OF RESIDENCES WITHIN 1000 FEET	26
CLOSEST TOWN OR CITY TO LOCUS PARCEL	13,160'± (SHARON)
FOLLOWING DISTANCES FROM TOWER CENTER	
NEAREST WETLANDS (ON LOCUS PROPERTY)	153'±
NORTHERN PROPERTY BOUNDARY	377'±
SOUTHERN PROPERTY BOUNDARY	140'±
WESTERN PROPERTY BOUNDARY	308'±
EASTERN PROPERTY BOUNDARY	210'±
CLOSET RESIDENCE	380'± (M: 47; L: 10)
CLOSEST SCHOOL OR DAYCARE	4,000'± (THE HOTCHKISS SCHOOL)
CLOSEST TOWN OR CITY	13,300'± (SHARON)

WETLAND BUFFER NOTE:
REFER TO THE CONSERVATION COMMISSION'S
INLAND WETLANDS AND WATERCOURSE'S
REGULATIONS OF THE TOWN OF SALISBURY,
CONNECTICUT SECTION 2.1 & 3.1 FOR FURTHER
INFORMATION ON WETLAND BUFFERS.



ProTerra
DESIGN GROUP, LLC

4 Bay Road
Bldg A; Suite 200
Hadley, MA 01035


Ph: (413)320-4918

CONSULTANTS:

NO.	DATE	REVISIONS
A	06/19/21	ISSUED FOR REVIEW
0	02/21/20	FOR PERMITTING
1	02/27/20	REVISED PERMITTING
2	05/12/20	REVISED PERMITTING
3	10/26/20	REVISED PERMITTING
4	11/03/20	REVISED PERMITTING
5	11/03/20	REVISED PERMITTING
6	02/03/21	REVISED PERMITTING

SITE NAME: SALISBURY
SITE NUMBER: CT2246
ADDRESS: 106 SHARON ROAD
LAKEVILLE, CT 06039

**NEW CINGULAR
WIRELESS PCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067**

APPLICANT:  at&t

STAMP:



DATE: 02/03/21

DRAWN: BLM

CHECK: JMM/TEJ

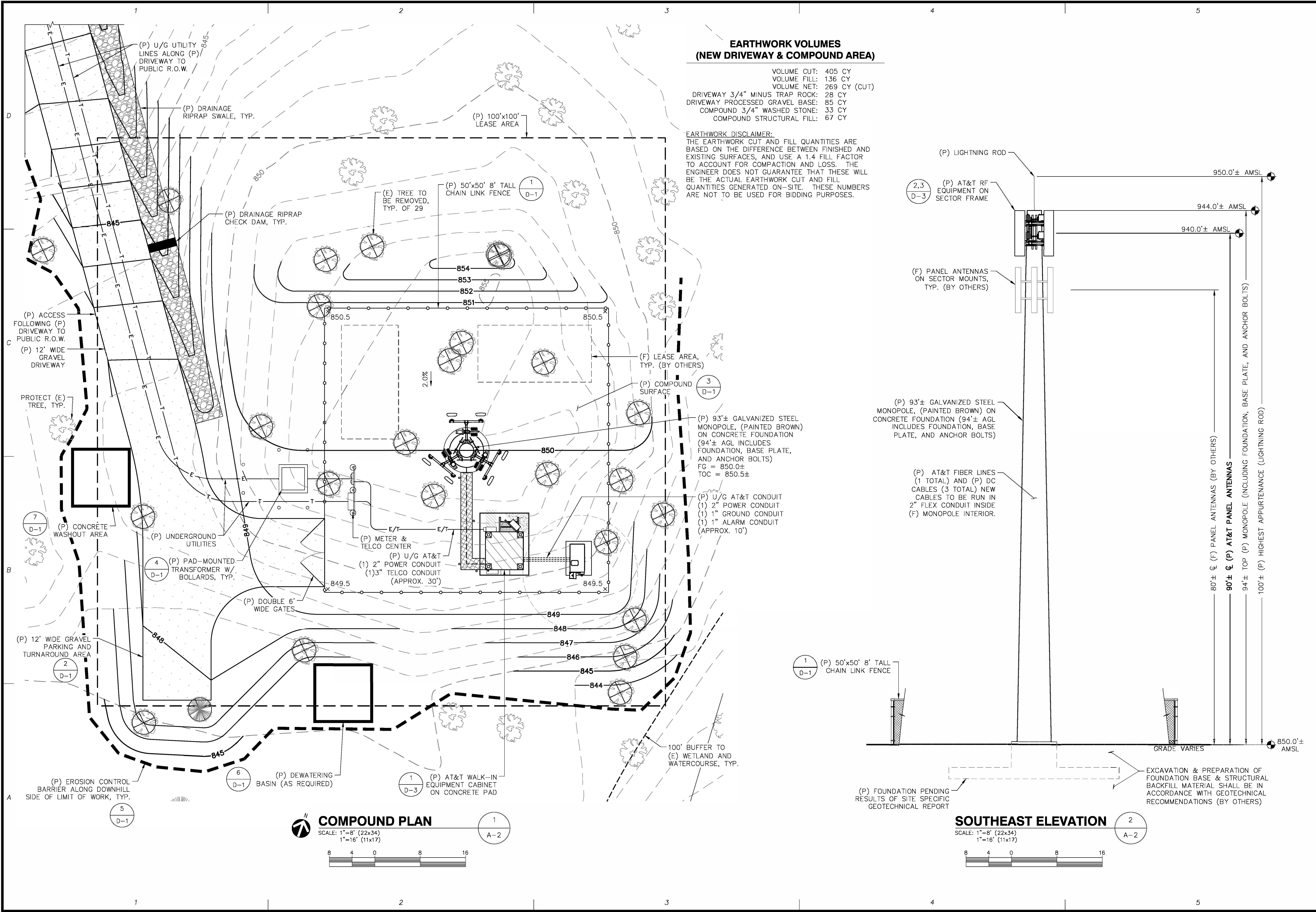
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JOB NO.: 18-063

SHEET TITLE:

**COMPILED
PLOT PLAN**

A-1



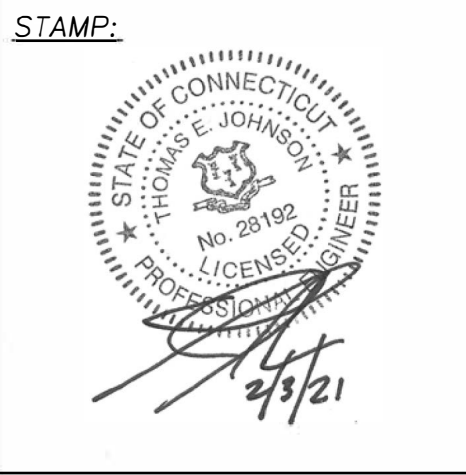
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6	02/03/21	REVISED PERMITTING

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SITE NUMBER: CT2246
ADDRESS: 106 SHARON ROAD
LAKEVILLE, CT 06089

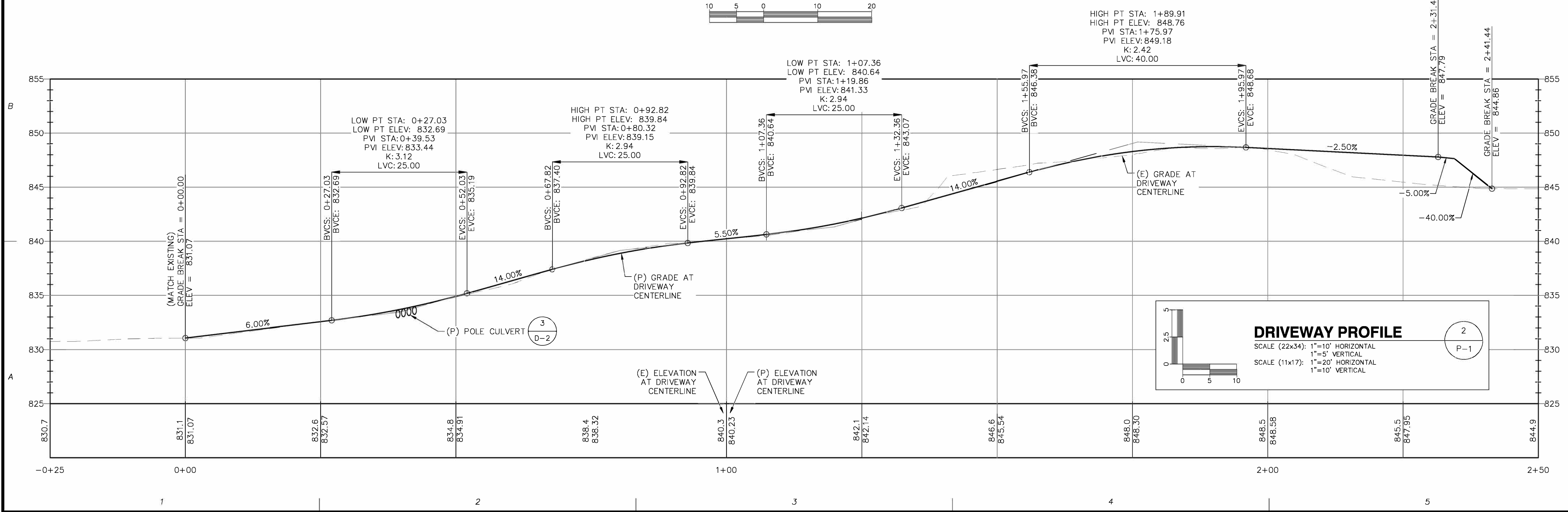
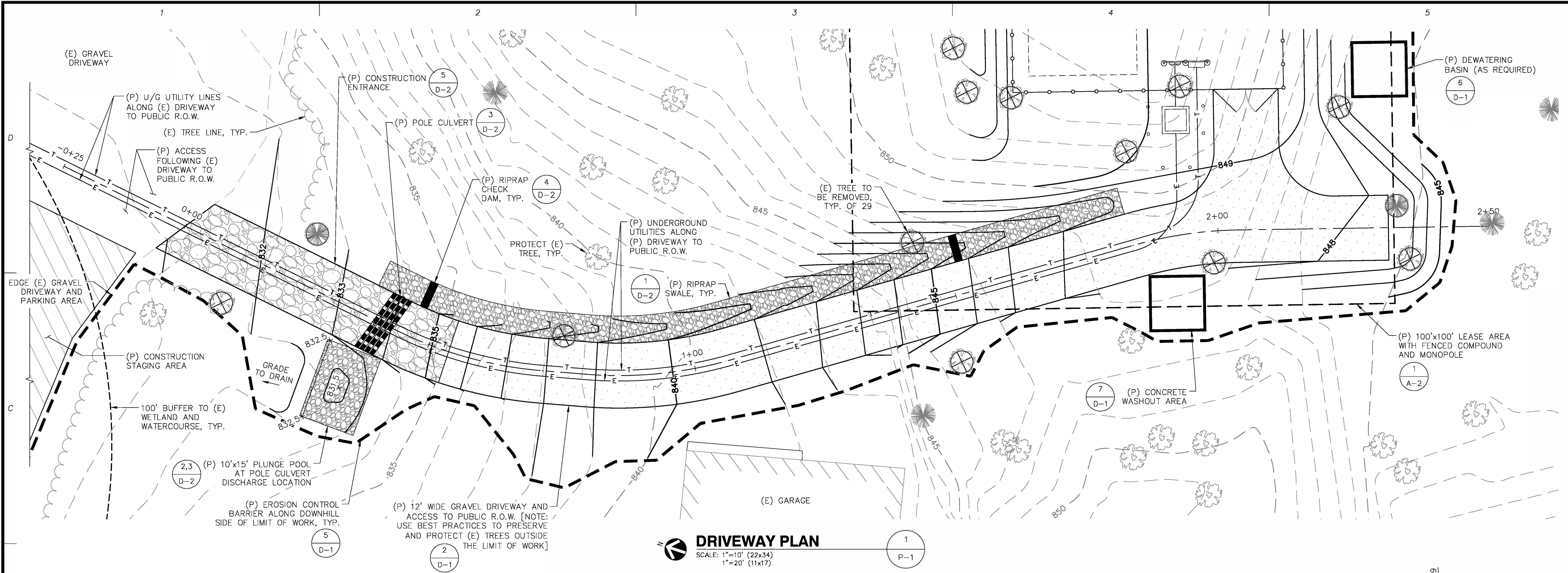
APPLICANT: at&t

**NEW CIRCULAR
WIRELESS PCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067**



DATE: 02/03/21
DRAWN: BLM
CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 18-063
SHEET TITLE:

COMPOUND PLAN
& ELEVATION



ProTerra
 DESIGN GROUP, LLC
 4 Bay Road
 Bldg A, Suite 200
 Hadley, MA 01035
 Ph: (413)320-4918

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ROCKY HILL, CT 06067

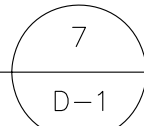
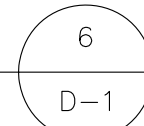
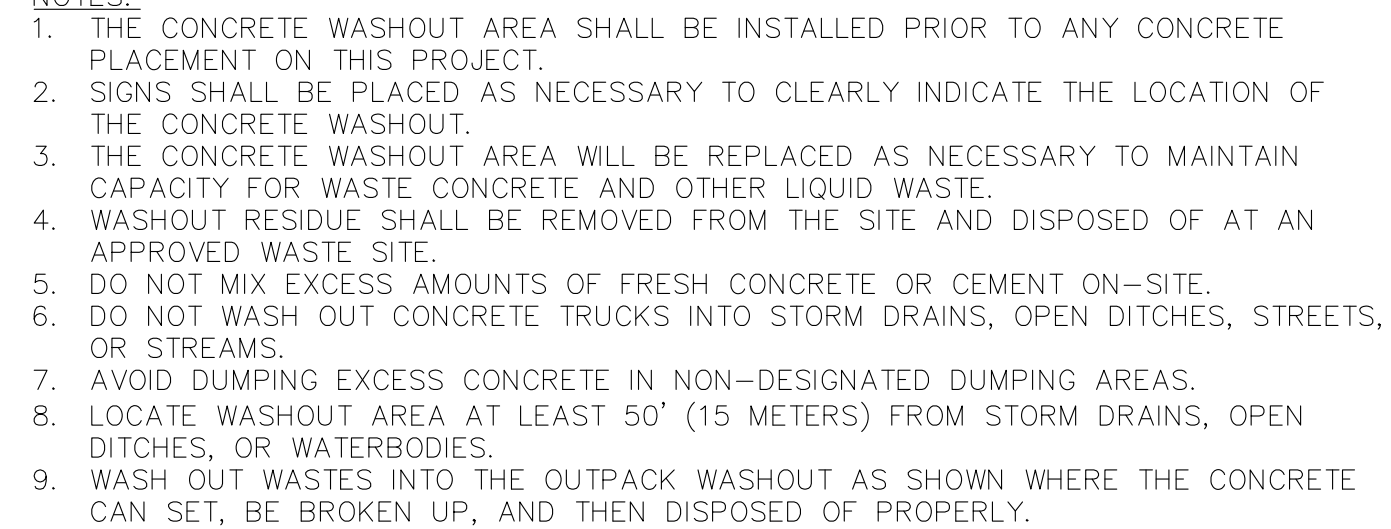
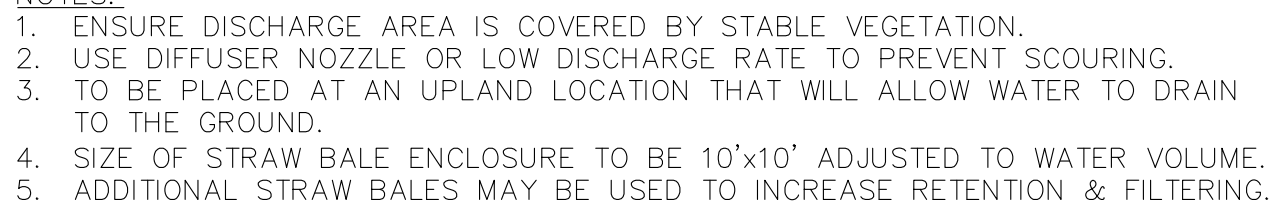
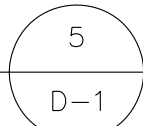
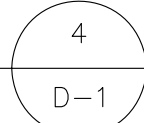
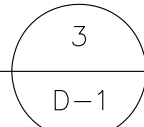
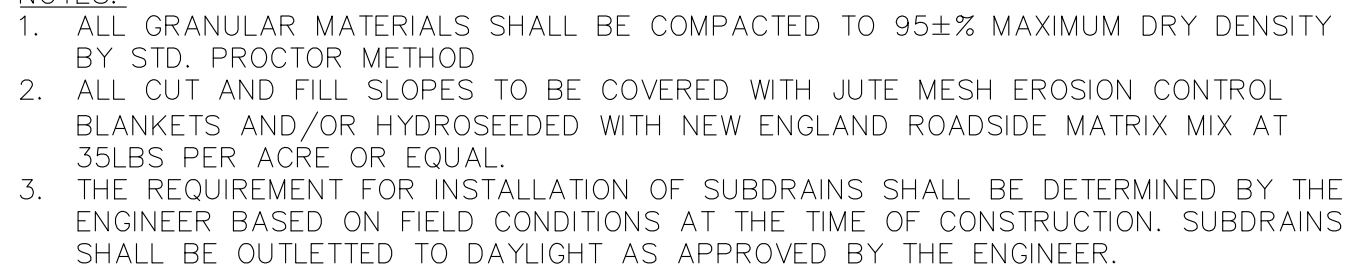
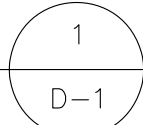
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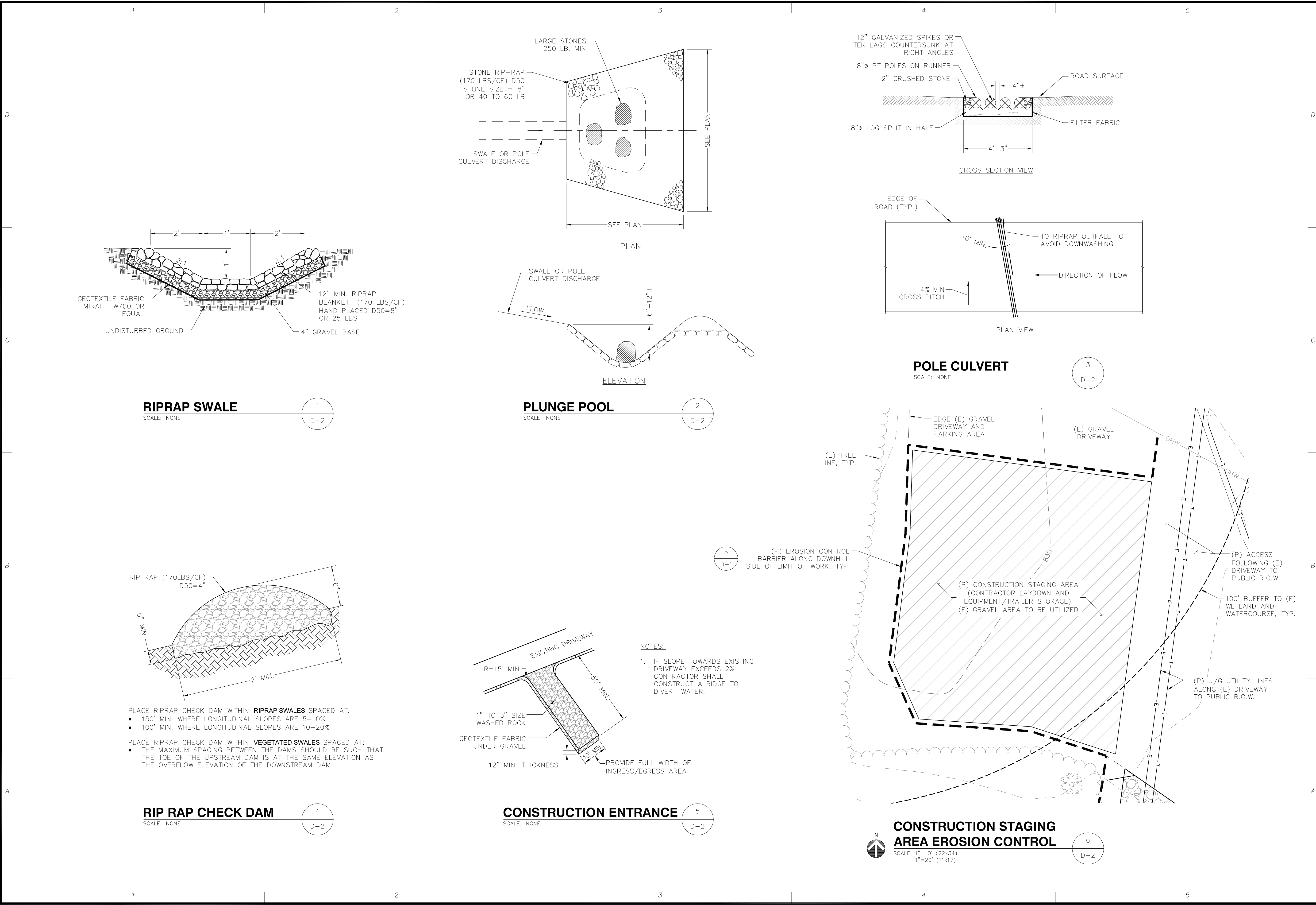
STAMP:

STATE OF CONNECTICUT
 THOMAS E. JOHNSON
 No. 28190
 PROFESSIONAL ENGINEER
 2/3/21

DATE: 02/03/21
 DRAWN: BLM
 CHECK: JMM/TEJ
 SCALE: SEE PLAN
 JOB NO.: 18-063
 SHEET TITLE:

DRIVEWAY PLAN
& PROFILE
P-1





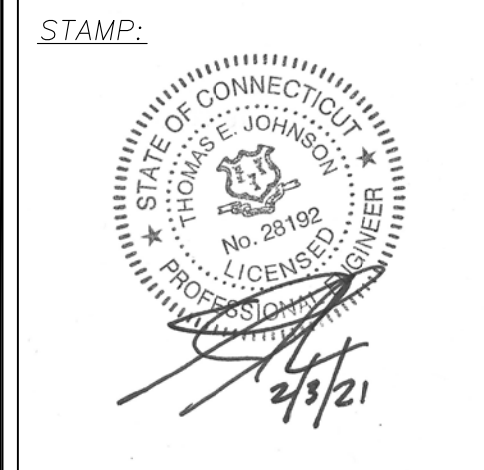
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at&t



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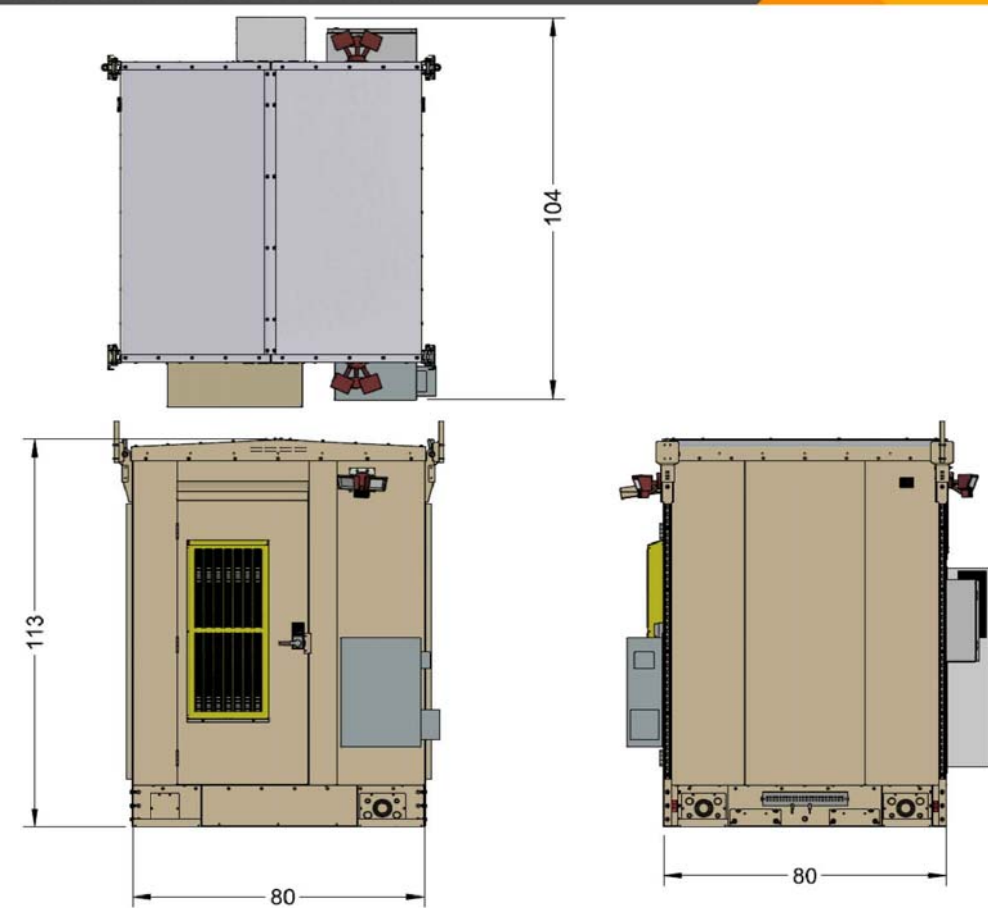
DETAILS

D-3

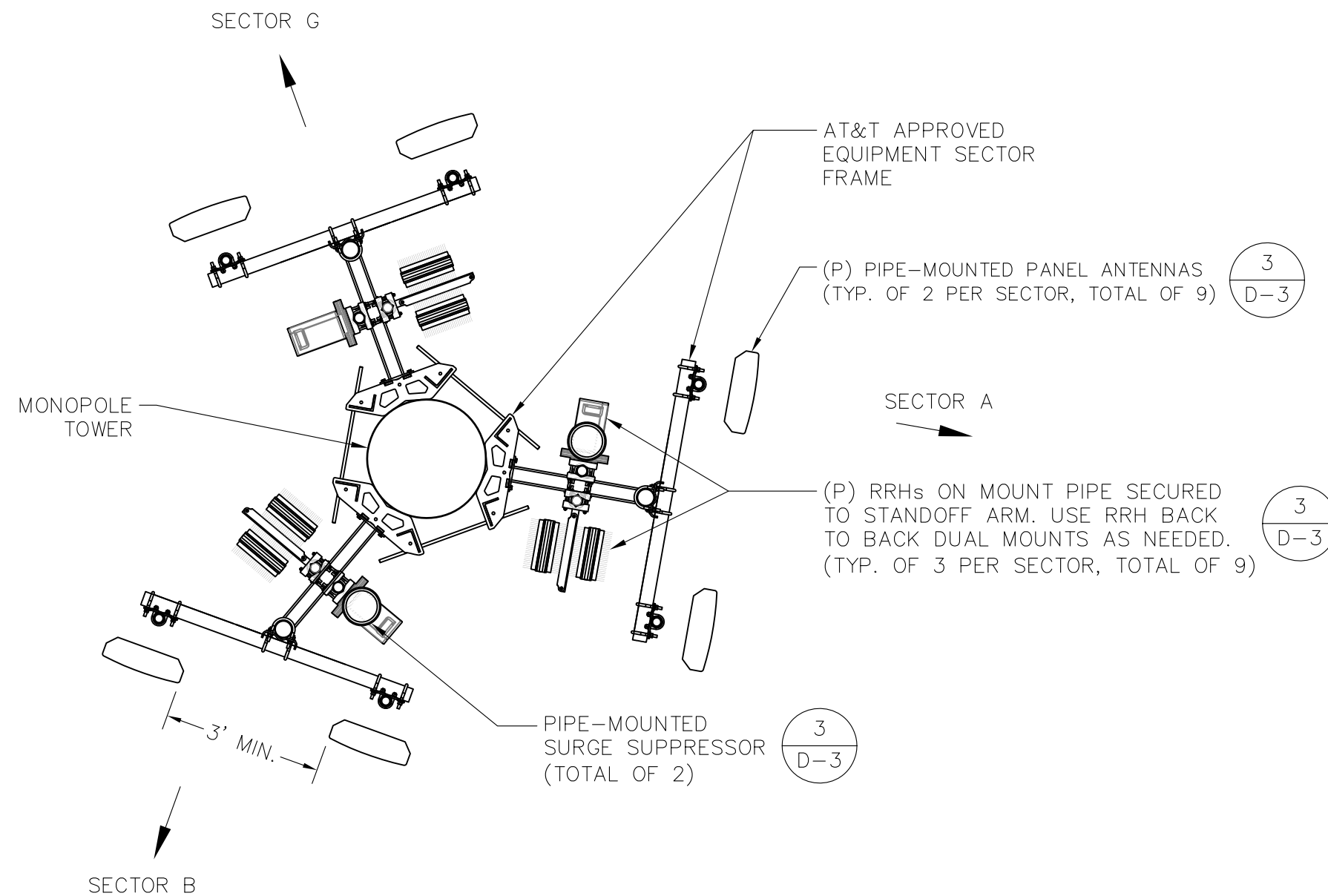
SMARTMOD UE - PRODUCT CONFIGURATION 6 X 6 WALK IN CABINET - ASSEMBLY DRAWING

- External Dimensions
 - 80" x 80" x 113"
- Internal Dimensions
 - 72" x 72" x 105"
- NEQ 19737 (includes below)

Component	Description
F2017012-WIC	ATT 6X6 WIC with labor DC power system, Schrefftech DAC, Marvair HVAC Integration
S82127000103	NS721-48V@3KA+24V@520A, 3 BAT TRAYS@STD
PTLC-12200-MTS	120/240, 200A 1PH; MTS, Strikeseor; 42-Pos SqD Panelboard; 40Hx30Wx10D NEMA Type 3R; ICL CamLok Panel and Utility voltage monitor and dry relay contact alarm for 120/240, 200A 1PH MP Series
AF000135	Direct Air Cooling unit - Lead Lag HVAC Controller/with Smoke Detector
PTS3703-WIC-WOF	Rack CommBay-WIC-Without Fiber Panel
PTS3704-WIC-WF	Rack CommBay-WIC-With Fiber Panel
ECUA12ACAD365-AS-100	1 TON WALL MOUNTED HVAC, supply & return grille and commstat controller and remote sensor
D1000-0010-0066	WIC Hut Platform Kit - (1) 80" x 80" Platform, (1) 2 Step Stair and (4) 6" x 7" Helical Foundation with Leveling Hardware.- Finish: Hot Dip Galvanized



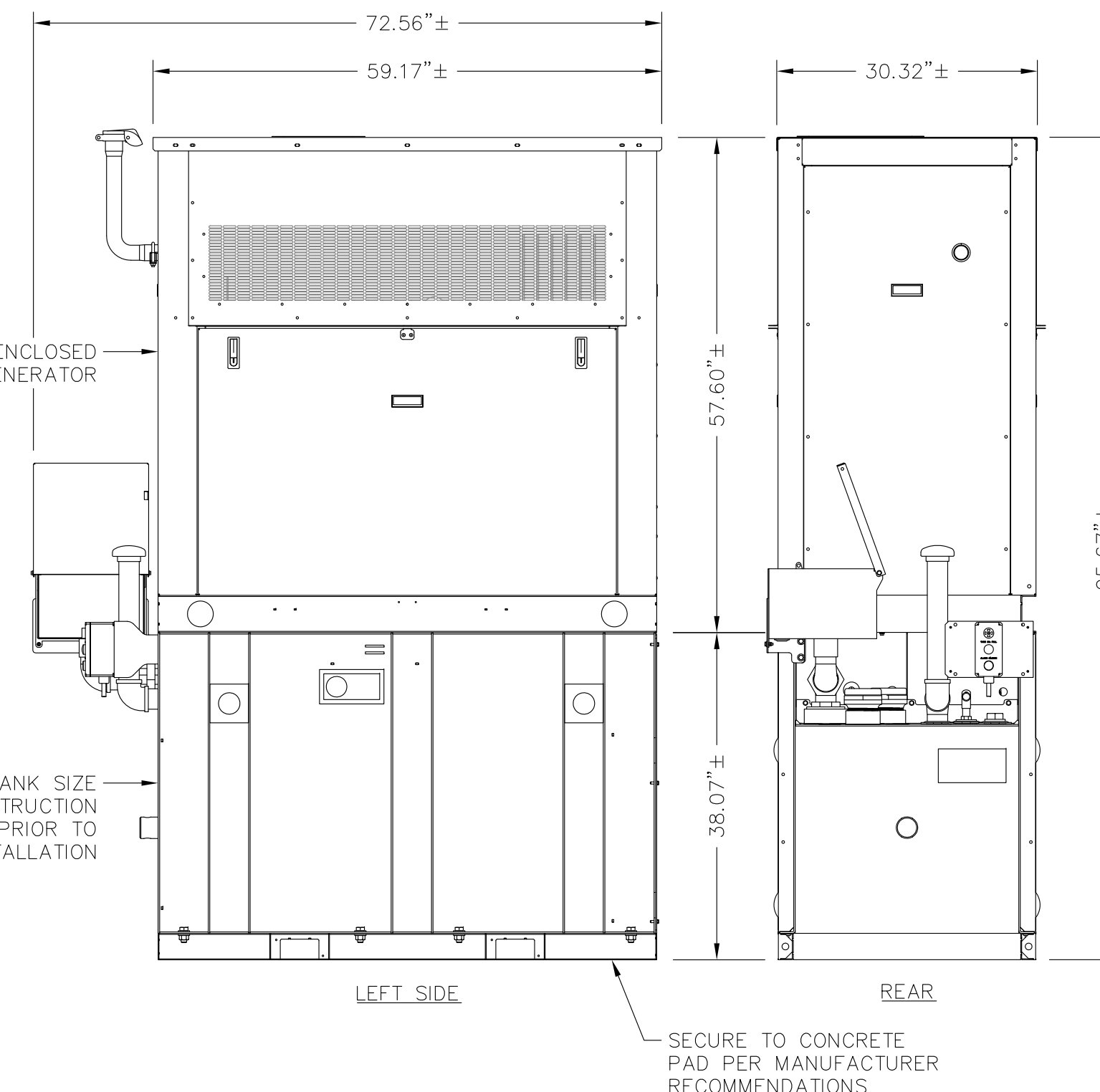
VERTIV.



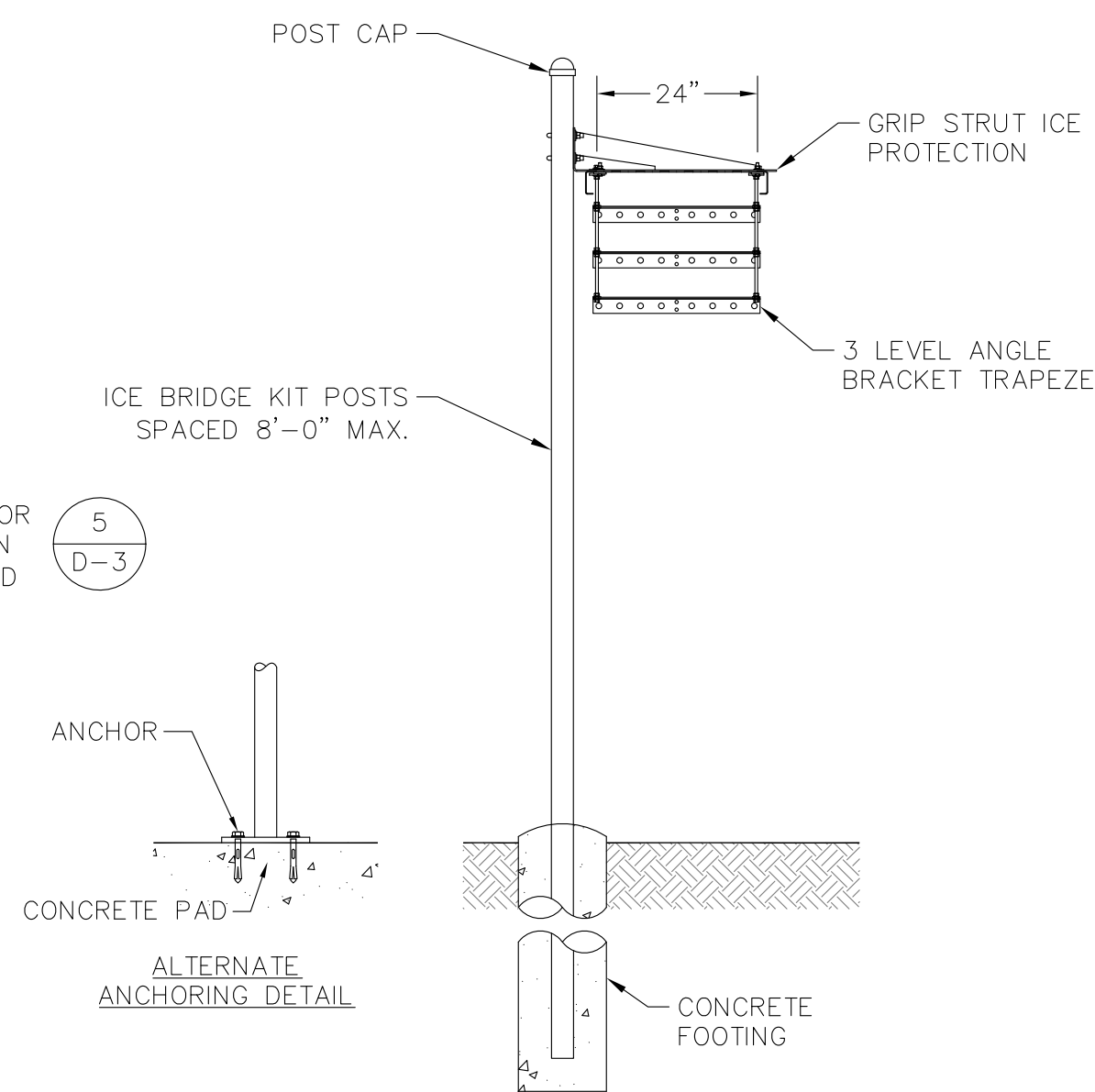
ANTENNA PLAN
SCALE: NONE

ANTENNA EQUIPMENT

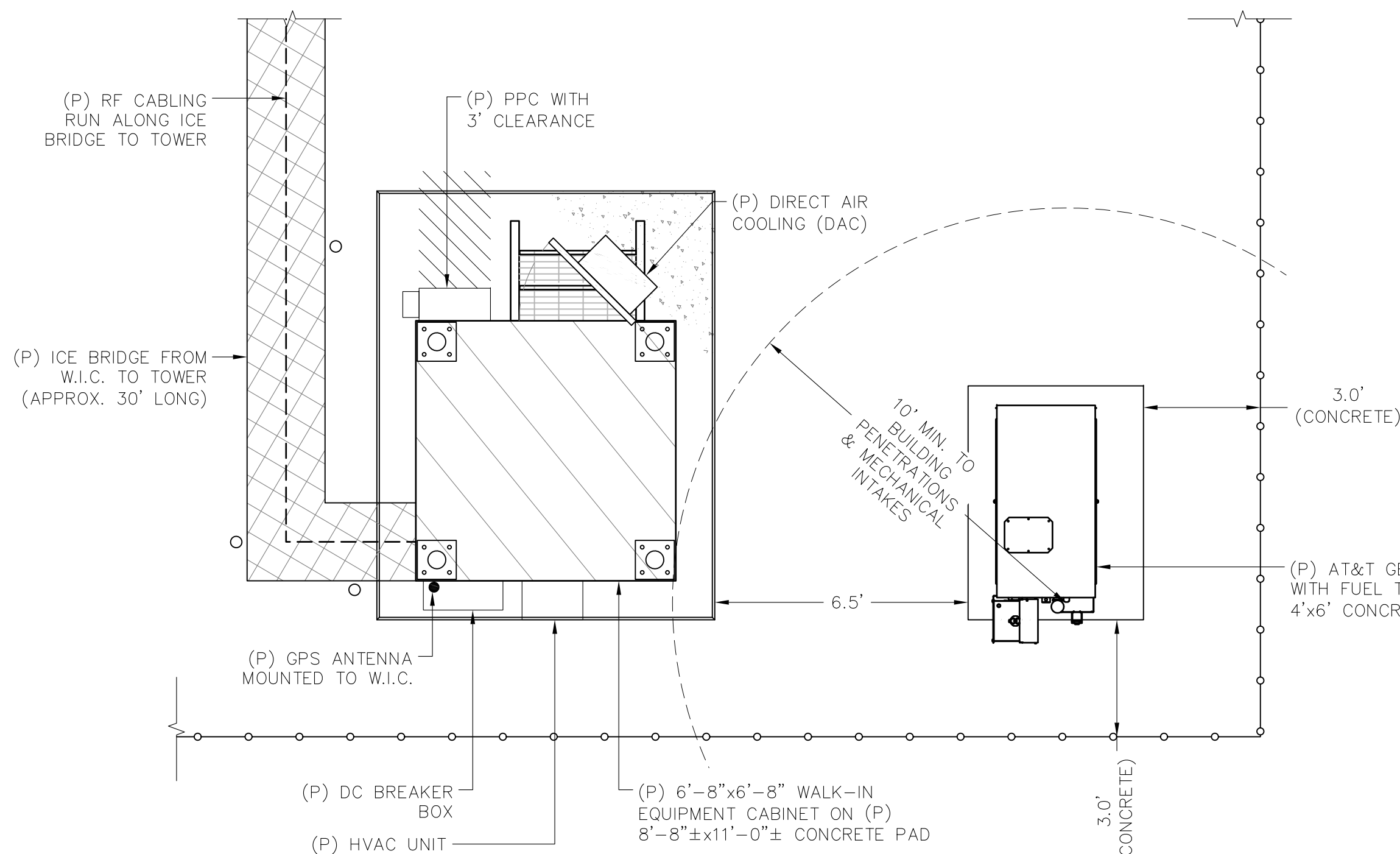
SCALE: NONE



DIESEL GENERATOR
SCALE: NONE



ICE BRIDGE
SCALE: NONE



GROUND EQUIPMENT LAYOUT PLAN

SCALE: 1\"/>

NOTE: 6'-8" X 6'-8" EQUIPMENT SHELTER FOR AT&T WIRELESS SERVICES BY VERTIV SHOWN. VERIFY MAKE AND MODEL WITH CONSTRUCTION MANAGER PRIOR TO COMMENCEMENT OF CONSTRUCTION

1
D-3

1-A CERTIFICATION

Applicant/Client: SAI
12 Industrial Way
Salem, NH 03079

Site Number: CT2246
Site Name: Salisbury
Site Address: 106 Sharon Road, Lakeville, CT 06039

Type of Survey: X GPS Survey X Ground Survey

Horizontal Datum: NAD83 - expressed in degrees of Latitude and Longitude
Vertical Datum: NAVD88 - expressed in feet Above Mean Sea Level (AMSL)

Structure Type:

<u> </u> Self-Support Tower	<u> X </u> Monopole Tower	<u> </u> Guyed Tower
<u> </u> Wood Pole	<u> </u> Water Tank	<u> </u> Smoke Stack
<u> </u> Roof Top	<u> </u> Church Steeple	<u> </u> Temporary Site
<u> </u> Silo	<u> </u> Other <u> </u>	

Center of Proposed Structure:	Latitude	41° 57' 26.06" N	41.9572395° N
	Longitude	73° 26' 05.88" W	73.4349678° W

Existing Ground Elevation at Structure:	855.0' (AMSL)	
Proposed Ground Elevation at Structure:	850.0' (AMSL)	0.0' (AGL)
Centerline of Proposed AT&T Antennas:	940.0' (AMSL)	90.0' (AGL)
Top of Proposed AT&T Antennas:	944.0' (AMSL)	94.0' (AGL)
Top of Proposed Tower:	944.0' (AMSL)	94.0' (AGL)
Highest Appurtenance (Lightning Rod):	950.0' (AMSL)	100.0' (AGL)

Certification: I certify that the latitude and the longitude are accurate to within +/- 20 feet horizontally, and that the ground elevation is accurate to within +/- 3 feet vertically.
The horizontal coordinates are based upon the North American Datum of 1983 (NAD 83) and are expressed in degrees of Latitude and Longitude. The elevations are based on the North American Vertical Datum of 1988 and are expressed in feet Above Mean Sea Level (AMSL).

Signature: Charles G. Gidman
Charles G. Gidman, RPLS #70103

Date: January 29, 2021




```

*****
*               Federal Airways & Airspace               *
*           Summary Report: New Construction               *
*               Antenna Structure                         *
*****

```

Airspace User: Not Identified

File: 12676423

Location: Torrington, CT

Latitude: 41°-57'-26.1" Longitude: 73°-26'-5.9"

SITE ELEVATION AMSL.....855 ft.

STRUCTURE HEIGHT.....100 ft.

OVERALL HEIGHT AMSL.....955 ft.

NOTICE CRITERIA

FAR 77.9(a): NNR (DNE 200 ft AGL)
 FAR 77.9(b): NNR (DNE Notice Slope)
 FAR 77.9(c): NNR (Not a Traverse Way)
 FAR 77.9: NNR (No Expected TERPS® impact with GBR)
 FAR 77.9: NNR (No Expected TERPS® impact 46N)
 FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required

NNR = Notice Not Required

PNR = Possible Notice Required (depends upon actual IFR procedure)
 For new construction review Air Navigation Facilities at bottom
 of this report.

Notice to the FAA is not required at the analyzed location and height for
 slope, height or Straight-In procedures. Please review the 'Air Navigation'
 section for notice requirements for offset IFR procedures and EMI.

OBSTRUCTION STANDARDS

FAR 77.17(a)(1): DNE 499 ft AGL
 FAR 77.17(a)(2): DNE - Airport Surface
 FAR 77.19(a): DNE - Horizontal Surface
 FAR 77.19(b): DNE - Conical Surface
 FAR 77.19(c): DNE - Primary Surface
 FAR 77.19(d): DNE - Approach Surface
 FAR 77.19(e): DNE - Approach Transitional Surface
 FAR 77.19(e): DNE - Abeam Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: GBR: WALTER J KOLADZA

Type: A RD: 83154.33 RE: 733.6

FAR 77.17(a)(1): DNE

FAR 77.17(a)(2): Does Not Apply.

VFR Horizontal Surface: DNE

VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: 46N: SKY PARK

Type: A RD: 109424.4 RE: 323

FAR 77.17(a)(1): DNE
FAR 77.17(a)(2): Does Not Apply.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)

FAR 77.17(a)(3) Departure Surface Criteria (40:1)
DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)

FAR 77.17(a)(4) MOCA Altitude Enroute Criteria
The Maximum Height Permitted is 2500 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT TYP NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAA IFR
41NK AIR WINCHELL MOUNTAIN	261.29	3.76	-186	
No Impact to VFR Transitional Surface. Below surface height of 276 ft above ARP.				
OCT0 HEL SHARON HOSPITAL	204.34	5.01	+315	
No Impact to Private Landing Facility Structure is beyond notice limit by 25441 feet.				

AIR NAVIGATION ELECTRONIC FACILITIES

FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRND ANGLE	APCH BEAR
PWL	VOR/DME	I	114.3	213.37	81866	-295	NY	PAWLING	-.21	
GBR	NDB	R	39	5.82	82683	+229	MA	GREAT BARRINGTON	.16	
IGN	VOR/DME	R	117.6	224.67	149842	+373	NY	KINGSTON	.14	
CTR	VOR/DME	R	115.1	47.1	179371	-645	MA	CHESTER	-.21	
BDL	VORTAC	D	109.0	91.92	203143	+795	CT	BRADLEY	.22	
BDL	RADAR	I		92.16	204829	+719	CT	BRADLEY INTL	.20	
BAF	VORTAC	R	113.0	68.85	208966	+688	MA	BARNES	.19	
QHA	RADAR ARSR	Y	1320.	33.7	227087	-1198	MA	West Cummington	-.3	

CFR Title 47, §1.30000-§1.30004

AM STUDY NOT REQUIRED: Structure is not near a FCC licensed AM station.
Movement Method Proof as specified in §73.151(c) is not required.
Please review 'AM Station Report' for details.

Nearest AM Station: WHDD @ 7649 meters.

Airspace® Summary Version 20.11.602

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01-21-2021
11:27:40

ATTACHMENT 5

Environmental Assessment Statement

I. PHYSICAL IMPACT

A. WATER FLOW AND QUALITY

A wetland delineation identified two wetlands at the proposed project site. Wetland A is located more than 100' to the east of the Facility compound. No new disturbance is proposed within 100' of Wetland A. Erosion controls consisting of a silt fence with straw bales or Silt Soxx will be installed around the proposed telecommunications facility. Wetland B is located to the west of an existing gravel and paved parking lot. The construction staging area is proposed within 100' of Wetland B, however no new grading is proposed in this area and erosion controls will be implemented. Proposed sedimentation and erosion controls will be designed, installed and maintained during construction activities in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control which will minimize temporary impacts. Given the installation and maintenance of the proposed sediment controls through construction, there are no anticipated adverse impacts to the wetlands. Attachment 6 includes a copy of the wetland inspection report.

B. AIR QUALITY

Under ordinary operating conditions, the equipment that would be used at the Facility will not emit air pollutants of any kind. An emergency backup power diesel generator would be exercised once a week and comply with the Connecticut Department of Energy and Environmental Protection ("DEEP") "permit by rule" criteria pursuant to R.C.S.A. §22a-174-3b.

C. LAND

Approximately 29 trees over 6" DBH will need to be removed in order to construct the compound and the new access drive. The total area of clearing and grading disturbance will be approximately 22,765 s.f. The remaining land of the lessor would remain unchanged by the construction and operation of the facility.

D. NOISE

The equipment to be in operation at the facility would not emit noise other than that provided by the operation of the installed heating, air-conditioning and ventilation system. Some construction related noise would be anticipated during facility construction, which is expected to take approximately four to six weeks. Temporary power outages could involve sound from the emergency generator which is tested weekly. The Environmental Sound Assessment in Attachment 10 confirms that the operation of the Facility during emergencies, when the back-up generator is operating, will not result in adverse impacts.

E. POWER DENSITY

The cumulative worst-case calculation of power density from AT&T's operations at the facility would be 18.21% of the federal MPE standard. Attachment 7 is a Radio Frequency Emissions Analysis Report for the Facility.

F. SCENIC, NATURAL, HISTORIC & RECREATIONAL VALUES

The Wake Robin Inn, which is located on the Parcel, is eligible for listing on the National Register of Historic Places ("National Register"). The Facility is also located approximately 0.25 miles from St. Mary's Catholic Church, which is eligible for listing on the National Register. Additionally, Lakeville Manor and the Lakeville Historic District, which are listed on the National Register, are within the Area of Potential Effect- Visual Effects. During the Applicant's consultation with SHPO, a height reduction and minor design modifications were requested. The Applicant incorporated SHPO's requested amendments and upon subsequent review, SHPO indicated that none of the identified historic resources will be impacted by the Facility. See SHPO Review Letter in Attachment 9. As determined by SHPO and demonstrated in the attached Viewshed Analysis Report, no cultural resources will be impacted by the Facility. See Attachments 8 & 9.

The facility site is located within 0.25 miles of an area identified on the Connecticut Department of Energy & Environmental Conservation ("CTDEEP") Natural Diversity Data Base ("NDDB") maps as the approximate locations of endangered, threatened and special concern species and significant natural

communities in Connecticut. A copy of the May 20, 2020 DEEP NDDB Compliance Determination is included in Attachment 9 that concludes that the Facility is not anticipated to have negative impacts to State-listed species.

G. VISIBILITY

Included in Attachment 8 is a Visibility Assessment & Photosimulations analysis which contains a viewshed map and photo simulations of off-site views. As detailed in the enclosed analysis, areas from where the Facility would be visible comprise approximately 248.1 acres during leaf-on conditions and approximately 275.3 acres during leaf-off conditions. Together, this represents, 13.70% of the 1-mile study area.

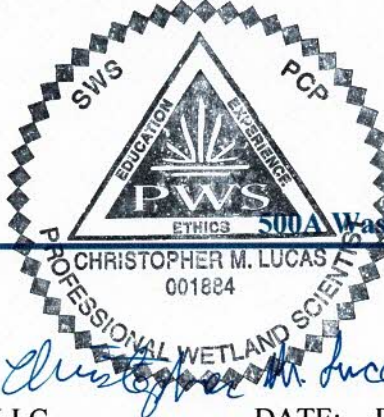
The majority of the leaf-on views, approximately 233.87 acres, are contained within the Wononskupomuc Lake Waterway that is located approximately 0.18 miles to the west of the Facility. The visual assessment concludes that visibility beyond Wononskupomuc Lake during leaf-on conditions is primarily concentrated in two main areas - a 3.6-acre area of farmland and residential property along Wells Hill Road to the east-northeast of the site and a 6.1-acre grassy area at the Hotchkiss School property, located approximately 0.87 mile from the Parcel. Topography, vegetation and the relative height of the tower will obscure, partially or totally, views of the tower from most locations in the study area during leaf-on conditions.

The majority of estimated views during leaf-off conditions are also from the Wononskupomuc Lake waterway. These views will be in areas to the north, southwest and east that are more than 0.5 miles from the site. These views are predicted to be intermittent, distant and partially obscured by existing vegetation.

H. SCHOOLS/DAY CARE CENTERS

The nearest school building is located +/- 4,000' from the Host Property: The Hotchkiss School at 11 Interlaken Road in Lakeville, which is located to the southwest of the Host Property. There are no day care centers located within 250' of the tower site.

ATTACHMENT 6



MEMORANDUM

TO: ProTerra Design Group, LLC
Attn: Thomas E. Johnson
4 Bay Road, Building A, Suite 200
Hadley, MA 01035

DATE: February 4, 2021

PROJECT NUMBER: 18140

FROM: Lucas Environmental, LLC
Christopher M. Lucas, PWS #1884, RPSS

RE: Site # S2246E
106 Sharon Road
Salisbury, CT 06039

A Registered Professional Soil Scientist (RPSS) from Lucas Environmental, LLC (LE) conducted a site investigation at 106 Sharon Road in the Lakeville Village of Salisbury, Connecticut on November 8, 2018 to determine if wetland resources were present near the location of the proposed telecommunications facility easement as shown on the Project Plans, prepared by ProTerra Design Group, LLC, last revised November 3, 2020.

The wetland investigation was performed in accordance with the Connecticut Inland Wetlands and Watercourses Act of 1972; and the "Corps of Engineers' Wetlands Delineation Manual" (1987), the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, v 2.0" (2012), and the Inland Wetlands and Watercourses' Regulations of the Town of Salisbury, Connecticut. The site investigation was limited to wetlands and watercourses within 100 feet of the proposed telecommunications tower, ancillary access road, and infrastructure (i.e., Study Area). A summary of the resource areas is included in the Resource Area Summary table.

This memo summarizes jurisdictional wetlands and watercourses as well as other Resource Areas subject to protection at the local, state, and federal level. It also provides a short summary of local, state, and federal regulations related to wetlands which may impact the proposed design. Please note that this effort is specific to wetland resources; it does not evaluate constraints related to local planning or zoning requirements, nor does it evaluate the potential for soil, air, or water contamination.

Wetlands and watercourses are regulated by both state and federal law, each with different definitions and regulatory requirements. A wetland that is connected to a Water of the United States is jurisdictional under Section 404 of the Clean Water Act. Generally if a wetland area is connected to, adjacent to, or in the very near vicinity of a Water of the U.S., then it is likely going to be considered connected and subject to the U.S. Army Corps of Engineers (USACE) jurisdiction. Based upon a review of the Project Plans, the proposed project is not located within federal jurisdictional resource areas; therefore, the project will not require a permit from the USACE.

A Certificate of Environmental Compatibility and Public Need is required from the Connecticut Siting Council for the construction of a new telecommunications facility. Such facilities are defined in Connecticut General Statutes § 16-50i (a) (5) and (6) and Section 16-50j-2a of the Regulations of Connecticut State Agencies. The Connecticut Siting Council conducts reviews for local jurisdiction of telecommunications facilities.

Wetland determinations are based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils and submerged land. Wetland resource areas identified within the property include two inland wetlands and watercourses, as identified on the attached Existing Conditions Plan.

Wetland A

Wetland A is a large scrub/shrub and forested wetland system located east of the proposed telecommunications facility. The wetland is delineated with pink survey tape numbered sequentially with flag series WFA1-1 to WFA-32. Wetland A drains from the south to the north with an intermittent stream conveying flows northward off-property via a corrugated metal pipe under a gravel access road. Wetland A consists of a red maple swamp vegetated with a sparse overstory of red maple (*Acer rubrum*) and American elm (*Ulmus americana*), with eastern hemlock (*Tsuga canadensis*) and green ash (*Fraxinus pennsylvanica*) present. The understory primarily consists of common winterberry (*Ilex verticillata*), tussock sedge (*Carex stricta*), broadleaf cattail (*Typha latifolia*), ironwood (*Carpinus caroliniana*), and Sphagnum moss (*Sphagnum* sp.), with sensitive fern (*Onoclea sensibilis*), Tatarian honeysuckle (*Lonicera tatarica*), golden rods (*Solidago* spp.), nannyberry (*Viburnum lentago*), red osier dogwood (*Cornus sericea*), and skunk cabbage (*Symplocarpus foetidus*) present.

Soils vary by location but generally consist of a histic epipedon or histosol overlying subsoil with a depleted matrix and redoximorphic features to depths of at least 20 inches. Indicators of wetland hydrology include shallow soil saturation, inundation, drainage patterns, water within one-inch of the surface, and buttressed tree roots. The wetland/upland boundary is located along a topographic break and where the break is lacking, based upon evidence of hydrophytic vegetation, presence of hydric soils, and wetland hydrology. State and federal boundaries are coincident.

Wetland B

Wetland B is a small forested wetland system located west of an existing gravel and paved parking lot. The wetland is delineated with pink survey tape numbered sequentially with flag series WFB1-1 to WFB-16. Two small culverts discharge to the upgradient portion of the wetland, apparently from the existing parking lot and developed areas of the site. A culvert conveys overflow from this wetland to a series of wetland pockets downslope that appear to connect to larger wetland systems off-site. LE did not delineate or examine these areas as they are all well over 100 feet from proposed work areas.

Wetland B consists of an overstory with eastern cottonwood (*Populus deltoides*) and willow (*Salix* sp.), with ironwood present. The understory is sparse and consists of Tatarian honeysuckle, nannyberry, garlic mustard (*Alliaria petiolata*), and woodfern (*Dryopteris* sp.). The vegetation surrounding this wetland pocket consists of sugar maple (*Acer saccharum*), white pine (*Pinus strobus*), oaks (*Quercus* spp.), Japanese barberry (*Berberis thunbergii*), and garlic mustard.

Soils vary by location but generally consist of a histic epipedon approximately 14-15 inches deep overlying subsoil with greater than 25 percent redoximorphic features to depths of at least 20 inches and 30 to 35 percent redoximorphic features greater than 20 inches. Indicators of wetland hydrology include shallow soil saturation, inundation, and drainage patterns. The wetland/upland boundary is located along a topographic break and where the break is lacking, based upon evidence of hydrophytic vegetation, presence of hydric soils, and wetland hydrology. State and federal boundaries are coincident.

Wetland Summary Memorandum

Resource Area Summary				
Resource	Federal, State, or Local Agency	Check appropriate boxes below		
		Present	Absent	Notes
1. Wetlands & Watercourses	USACE & CT DEEP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WFA-1 to 32 WFB-1 to 16
2. Upland Review Area	Connecticut Siting Council	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Upland Review Area: 100-feet from any wetland or watercourse
3. Poorly Drained, Very Poorly Drained, Alluvial, or Floodplain Soils & Submerged Land	USDA NRCS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8 – Mudgepond and Alden soils, extremely stony 94C – Farmington-Nellis complex, with hydric soil inclusions
4. Tidal Wetlands	USACE; CT DEEP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5. Coastal Area Boundary	Connecticut Environmental Conditions Online (CTECO) Map Viewer (for identification of resources only)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6. CT Critical Habitats		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Aquifer Protection Area		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Aquifer Protection Area (APA) Name: Lakeville (Pettee St.) No work proposed in APA*
8. CT 303(d) Impaired Waterbody		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9. Floodplain	Federal Emergency Management Agency (FEMA)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/1989 FEMA FIRM for the Town of Salisbury, CT Community Panel Number 090052 0018B Zone X
10. State and Federal Listed Species & Significant Natural Communities	CT DEEP Natural Diversity Data Base (NDDB)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Area is located approximately 500 feet from proposed work, but not within Study Area
11. Federally-listed Threatened or Endangered Species	U.S. Fish and Wildlife Service (USFWS) – New England Field Office	Consultation with USFWS will be completed through the National Environmental Policy Act (NEPA) Screening Review		

*The Salisbury Inland Wetlands and Watercourses' Regulations do not extend jurisdiction to the APA; however, Section 403 of the Salisbury Zoning Regulations establishes the requirements for work within the Aquifer Protection Overlay District. Based upon review of the attached Water Resource Overlay provided by ProTerra Design Group, no work is proposed within the APA, although present on-site.

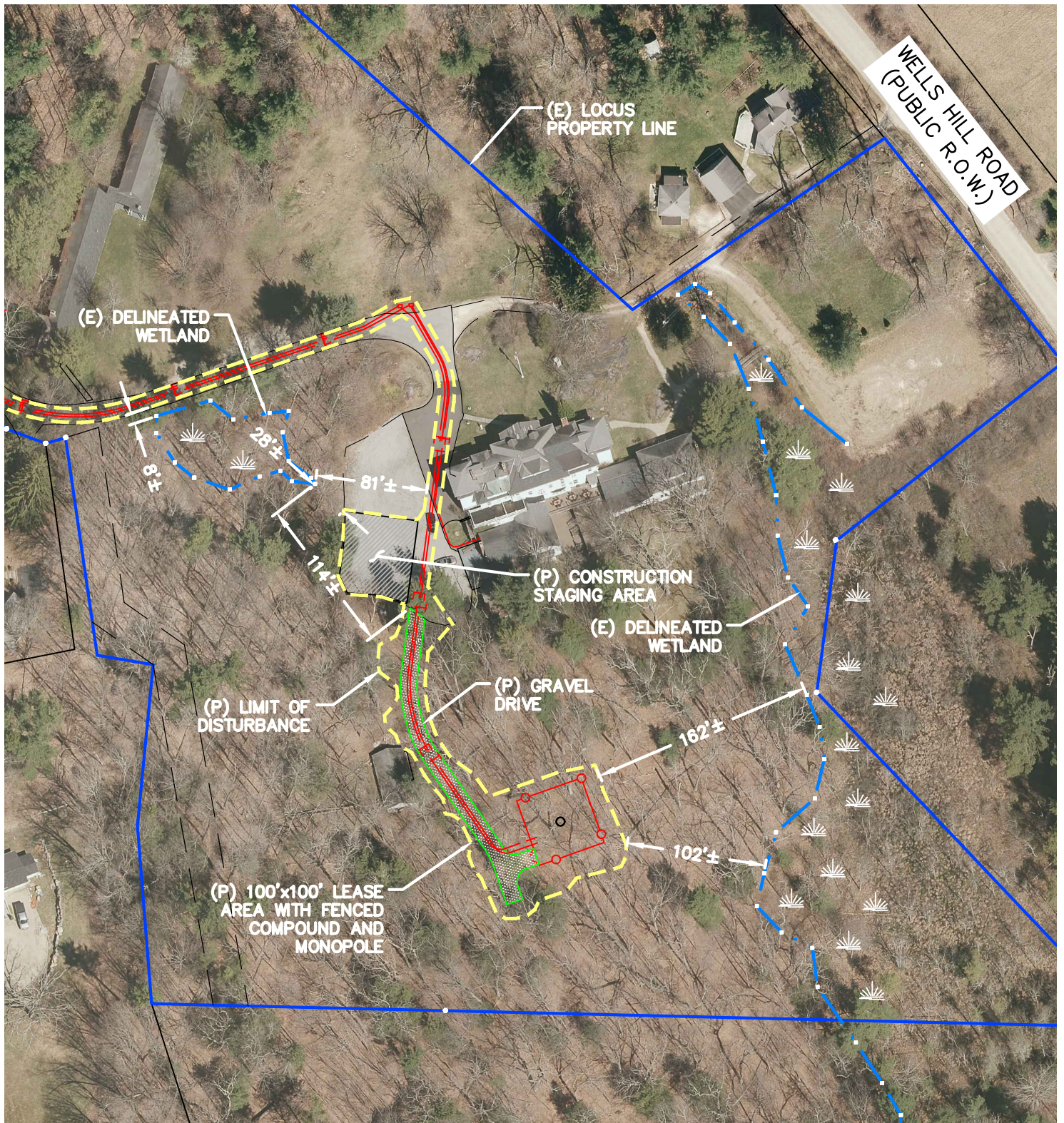
Based upon a review of the Project Plans, the proposed telecommunications facility will be approximately located within the southern portion of the site. The lease area for the facility is approximately 10,000 square feet, and will contain a 94-foot tall monopole with lightning rod for a total height of 100 feet. The facility will be located within a fenced compound surrounded by a six-foot tall chain link fence. Associated telecommunications equipment will be located at the base of the structure within the fenced compound area, while a pad-mounted transformer will be located just outside the compound. The facility will be accessed via a 12-foot wide gravel driveway extending from the existing parking lot to the compound.

LE does not anticipate any adverse impacts to any resource areas, provided the erosion and sedimentation controls are installed and maintained through construction per the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (Connecticut Department of Energy and Environmental Protection Bulletin 34). LE defers to ProTerra Design Group for the project design's compliance with the CT Guidelines for Soil Erosion and Sediment Control.

Erosion controls consisting of silt fence with straw bales or Silt Soxx will be installed around the proposed telecommunications facility which is located more than 100 feet from Wetland A. No new disturbance is proposed within 100 feet of Wetland A or B. The construction staging area is proposed within 100 feet of Wetland B; however, no grading is proposed and the area will be secured with erosion controls (noted above). The construction staging area will consist of approximately 3,640 square feet of the gravel parking lot and the utility installation will consist of approximately 2,230 square feet of the existing paved area within 100 feet of Wetland B. Two small drainage pipes are located along the hillside and should be monitored during construction to ensure no erosion issues or impacts to the downgradient wetland.

Enclosures:

1. Aerial Map Overlay
2. Water Resource Overlay
3. USDA NRCS Custom Soil Resource Report
4. Existing Conditions Plan



AERIAL MAP OVERLAY

SCALE: 1"=100'

ProTerra
DESIGN GROUP, LLC

4 Bay Road, Bldg. A
Suite 200
Hadley, MA 01035
Ph: (413) 320-4918

LOCATION PLANS

SITE NUMBER: CT2246

SITE NAME: SALISBURY

ADDRESS: 106 SHARON ROAD
LAKEVILLE, CT 06039



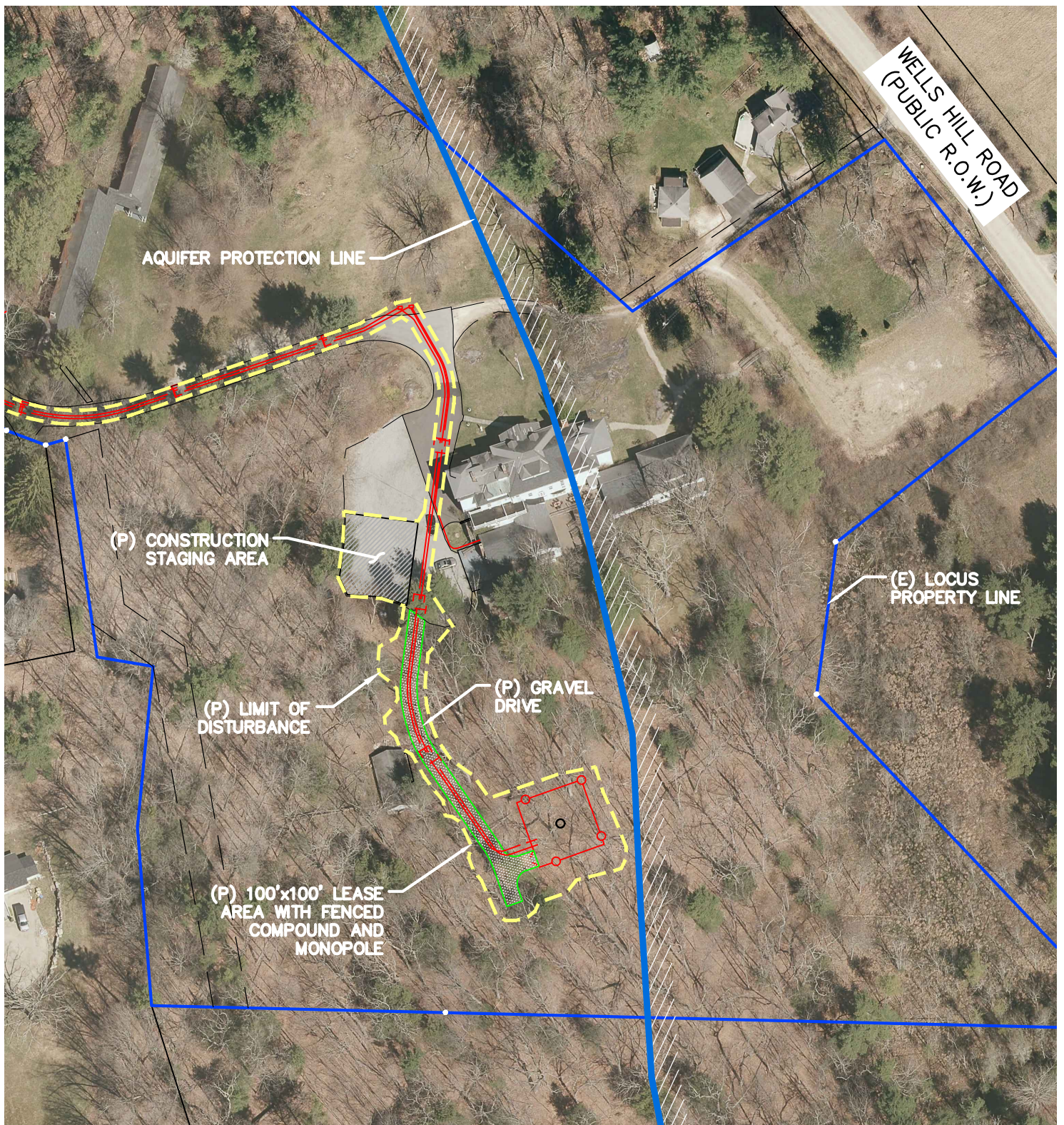
NEW CINGULAR
WIRELESS PCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

DATE: 1/29/2021

REVISION: 1

JOB NO.: 18-063

SHEET: SK



REFERENCE: DATA LAYERS ACQUIRED FROM
STATE OF CONNECTICUT DEPARTMENT OF
ENERGY & ENVIRONMENTAL PROTECTION.
DATA.GOV



WATER RESOURCE OVERLAY

SCALE: 1"=100'

ProTerra
DESIGN GROUP, LLC

4 Bay Road, Bldg. A
Suite 200
Hadley, MA 01035

Ph: (413) 320-4918

LOCATION PLANS

SITE NUMBER: CT2246

SITE NAME: SALISBURY

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United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for State of Connecticut

106 Sharon Road, Lakeville,
Connecticut



February 4, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry


 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 20, Jun 9, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 23, 2018—Sep 17, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8	Mudgepond and Alden soils, extremely stony	1.5	9.4%
90B	Stockbridge loam, 3 to 8 percent slopes	2.5	15.4%
90C	Stockbridge loam, 8 to 15 percent slopes	1.2	7.3%
94C	Farmington-Nellis complex, 3 to 15 percent slopes, very rocky	10.6	65.2%
95E	Farmington-Rock outcrop complex, 15 to 45 percent slopes	0.5	2.8%
Totals for Area of Interest		16.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Connecticut

8—Mudgepond and Alden soils, extremely stony

Map Unit Setting

National map unit symbol: 9lqy
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Mudgepond and similar soils: 45 percent
Alden and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mudgepond

Setting

Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy till derived from limestone and dolomite and/or schist

Typical profile

A - 0 to 11 inches: silt loam
Bg - 11 to 16 inches: loam
Bw1 - 16 to 26 inches: fine sandy loam
Bw2 - 26 to 35 inches: gravelly fine sandy loam
C - 35 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Available water capacity: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C/D
Ecological site: F144AY039NY - Semi-Rich Wet Till Depressions
Hydric soil rating: Yes

Description of Alden

Setting

Landform: Drainageways, depressions

Down-slope shape: Linear, concave

Across-slope shape: Concave

Parent material: Fine-loamy till derived from limestone and dolomite and/or schist

Typical profile

A1 - 0 to 4 inches: mucky silt loam

A2 - 4 to 13 inches: silt loam

Bg1 - 13 to 23 inches: silt loam

Bg2 - 23 to 29 inches: silt loam

Cg1 - 29 to 43 inches: gravelly loam

Cg2 - 43 to 60 inches: loam

Properties and qualities

Slope: 0 to 3 percent

Surface area covered with cobbles, stones or boulders: 9.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 15 percent

Available water capacity: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C/D

Ecological site: F144AY040NY - Semi-Rich Very Wet Till Depressions

Hydric soil rating: Yes

Minor Components

Georgia

Percent of map unit: 5 percent

Landform: Hills

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Amenia

Percent of map unit: 5 percent

Landform: Hills

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: No

Nellis

Percent of map unit: 5 percent

Landform: Hills

Down-slope shape: Convex

Across-slope shape: Convex
Hydric soil rating: No

Stockbridge

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

90B—Stockbridge loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9lrr
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Stockbridge and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Stockbridge

Setting

Landform: Hills
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy till derived from limestone and dolomite and/or schist

Typical profile

Ap - 0 to 10 inches: loam
Bw1 - 10 to 20 inches: loam
Bw2 - 20 to 28 inches: loam
C1 - 28 to 42 inches: gravelly loam
C2 - 42 to 48 inches: gravelly loam
C3 - 48 to 65 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water capacity: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY036NY - Semi-Rich Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Georgia

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Mudgepond

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Alden

Percent of map unit: 3 percent
Landform: Drainageways, depressions
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Nellis

Percent of map unit: 3 percent
Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Farmington

Percent of map unit: 2 percent
Landform: Hills, ridges
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Paxton

Percent of map unit: 2 percent
Landform: Drumlins, hills, till plains
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

90C—Stockbridge loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9lrs

Elevation: 0 to 1,200 feet

Mean annual precipitation: 43 to 54 inches

Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 185 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Stockbridge and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Stockbridge

Setting

Landform: Hills

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Coarse-loamy till derived from limestone and dolomite and/or schist

Typical profile

Ap - 0 to 10 inches: loam

Bw1 - 10 to 20 inches: loam

Bw2 - 20 to 28 inches: loam

C1 - 28 to 42 inches: gravelly loam

C2 - 42 to 48 inches: gravelly loam

C3 - 48 to 65 inches: gravelly loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 10 percent

Available water capacity: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: F144AY036NY - Semi-Rich Well Drained Till Uplands

Hydric soil rating: No

Minor Components

Georgia

Percent of map unit: 5 percent

Landform: Hills

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Mudgepond

Percent of map unit: 5 percent

Landform: Depressions, drainageways

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Alden

Percent of map unit: 3 percent

Landform: Depressions, drainageways

Down-slope shape: Concave, linear

Across-slope shape: Concave

Hydric soil rating: Yes

Nellis

Percent of map unit: 3 percent

Landform: Hills

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Farmington

Percent of map unit: 2 percent

Landform: Hills, ridges

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Paxton

Percent of map unit: 2 percent

Landform: Drumlins, hills, till plains

Down-slope shape: Linear

Across-slope shape: Convex

Hydric soil rating: No

94C—Farmington-Nellis complex, 3 to 15 percent slopes, very rocky

Map Unit Setting

National map unit symbol: 9ls1

Elevation: 0 to 1,200 feet

Mean annual precipitation: 43 to 56 inches

Custom Soil Resource Report

Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 185 days

Farmland classification: Not prime farmland

Map Unit Composition

Farmington and similar soils: 40 percent

Nellis and similar soils: 35 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farmington

Setting

Landform: Hills, ridges

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy melt-out till derived from limestone and dolomite and/or schist

Typical profile

A - 0 to 3 inches: fine sandy loam

Bw1 - 3 to 8 inches: fine sandy loam

Bw2 - 8 to 17 inches: fine sandy loam

2R - 17 to 80 inches: bedrock

Properties and qualities

Slope: 3 to 15 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Available water capacity: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Ecological site: F144AY035MA - Shallow Semi-Rich Well Drained Till Uplands

Hydric soil rating: No

Description of Nellis

Setting

Landform: Hills

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Coarse-loamy melt-out till derived from limestone and dolomite and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam

Bw1 - 8 to 14 inches: fine sandy loam

Custom Soil Resource Report

Bw2 - 14 to 25 inches: fine sandy loam

BC - 25 to 27 inches: loam

C - 27 to 60 inches: sandy loam

Properties and qualities

Slope: 3 to 15 percent

Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)*

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Available water capacity: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: B

Ecological site: F144AY036NY - Semi-Rich Well Drained Till Uplands

Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 6 percent

Hydric soil rating: No

Stockbridge

Percent of map unit: 5 percent

Landform: Hills

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Charlton

Percent of map unit: 5 percent

Landform: Hills

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Georgia

Percent of map unit: 5 percent

Landform: Hills

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Amenia

Percent of map unit: 2 percent

Landform: Hills

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: No

Mudgepond

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

95E—Farmington-Rock outcrop complex, 15 to 45 percent slopes

Map Unit Setting

National map unit symbol: 9ls4
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Farmington and similar soils: 60 percent
Rock outcrop: 20 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farmington

Setting

Landform: Hills, ridges
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy melt-out till derived from limestone and dolomite and/or schist

Typical profile

A - 0 to 3 inches: fine sandy loam
Bw1 - 3 to 8 inches: fine sandy loam
Bw2 - 8 to 17 inches: fine sandy loam
2R - 17 to 80 inches: bedrock

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent

Custom Soil Resource Report

Available water capacity: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: F144AY035MA - Shallow Semi-Rich Well Drained Till Uplands

Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Hills, ridges

Properties and qualities

Slope: 15 to 45 percent

Depth to restrictive feature: 0 inches to lithic bedrock

Runoff class: Very high

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Hydric soil rating: Unranked

Minor Components

Stockbridge

Percent of map unit: 5 percent

Landform: Hills

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Nellis

Percent of map unit: 5 percent

Landform: Hills

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Unnamed, moderately deep to deep

Percent of map unit: 3 percent

Hydric soil rating: No

Charlton

Percent of map unit: 3 percent

Landform: Hills

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Amenia

Percent of map unit: 2 percent

Landform: Hills

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: No

Custom Soil Resource Report

Georgia

Percent of map unit: 2 percent

Landform: Hills

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

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ATTACHMENT 7



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Calculated Radio Frequency Emissions



CT2246

106 Sharon Road, Lakeville, CT 06039

February 17, 2021

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed installation of AT&T antenna arrays to be mounted on an extension of the existing monopole tower located at 106 Sharon Road in Lakeville, CT. The coordinates of the tower are 41° 57' 26.06" N, 73° 26' 05.88" W.

AT&T is proposing the following:

- 1) Install nine (9) multi-band antennas (three per sector) to support its commercial LTE network and the FirstNet National Public Safety Broadband Network ("NPSBN").

This report considers the planned antenna configuration for AT&T¹ to derive the resulting % MPE of its proposed installation.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm²). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

¹ As referenced to AT&T's Radio Frequency Design Sheet updated 10/29/2020.

3. RF Exposure Calculation Methods

The power density calculation results were generated using the following formula as outlined in FCC bulletin OET 65, and Connecticut Siting Council recommendations:

$$\text{Power Density} = \left(\frac{1.6^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

ERP = Effective Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna

V = Vertical Distance from radiation center of antenna

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all antenna channels are transmitting simultaneously. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not consider actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.

4. Calculation Results

Table 1 below outlines the power density information for the site. The proposed AT&T antennas are directional in nature; therefore, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to Attachment C for the vertical pattern of the proposed AT&T antennas. The calculated results for AT&T in Table 1 include a nominal 10 dB off-beam pattern loss to account for the lower relative gain below the antennas.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm ²)	Limit	% MPE
AT&T	90	739	1	3156	0.0161	0.4927	3.27%
AT&T	90	763	1	3541	0.0181	0.5087	3.55%
AT&T	90	885	1	3883	0.0198	0.5900	3.36%
AT&T	90	1900	1	5877	0.0300	1.0000	3.00%
AT&T	90	2100	1	9890	0.0504	1.0000	5.04%
						Total	18.21%

Table 1: Carrier Information²

² Antenna height listed for AT&T is in reference to the ProTerra Design Group site drawings dated February 3, 2021 (Rev. 6).

5. Conclusion

The above analysis concludes that RF exposure at ground level from the proposed site modifications will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using conservative calculation methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at ground level is **18.21% of the FCC General Population/Uncontrolled limit.**

As noted previously, the calculated % MPE levels are more conservative (higher) than the actual % MPE levels will be from the finished modifications.

6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in FCC OET Bulletin 65 Edition 97-01, ANSI/IEEE Std. C95.1, and ANSI/IEEE Std. C95.3.



Reviewed/Approved By: Martin Lavin
Senior RF Engineer
C Squared Systems, LLC

February 17, 2021
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2005, IEEE Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2002 (R2008), IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, 100 kHz-300 GHz IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure³

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure⁴

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 2: FCC Limits for Maximum Permissible Exposure (MPE)

³ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure

⁴ General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure

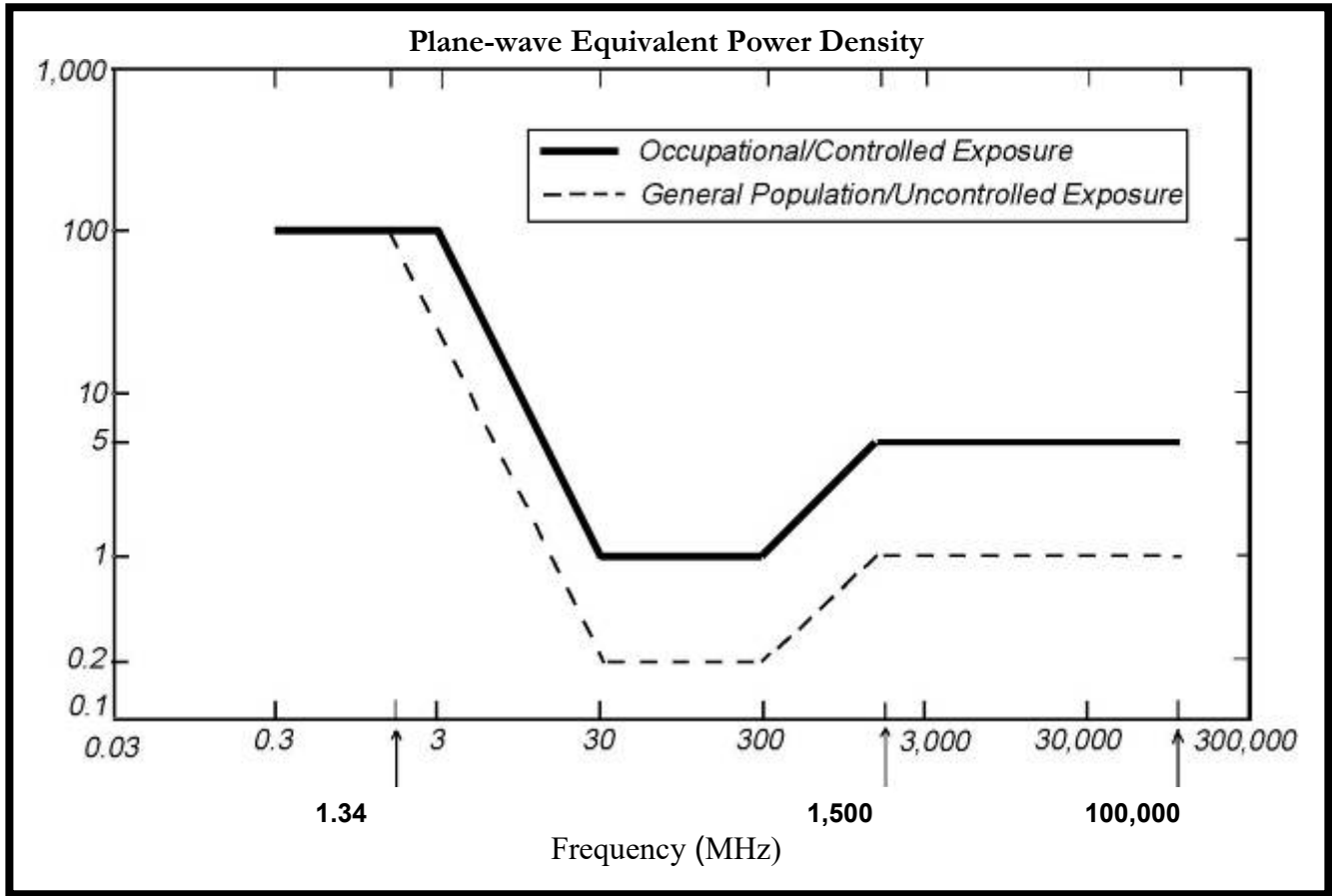
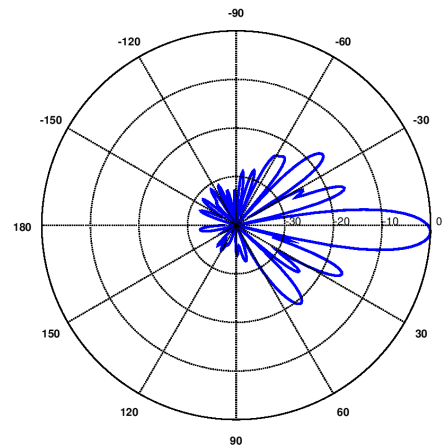


Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: AT&T Antenna Data Sheets and Electrical Patterns

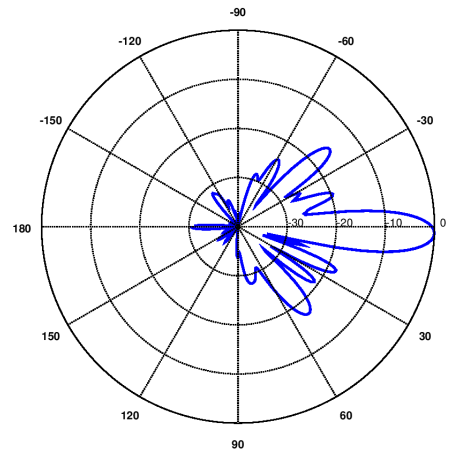
739 MHz

Manufacturer: CCI
 Model #: DMP65R-BU8DA
 Frequency Band: 698-798 MHz
 Gain: 15.1 dBi
 Vertical Beamwidth: 9.5°
 Horizontal Beamwidth: 75°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 20.7" x 7.7"



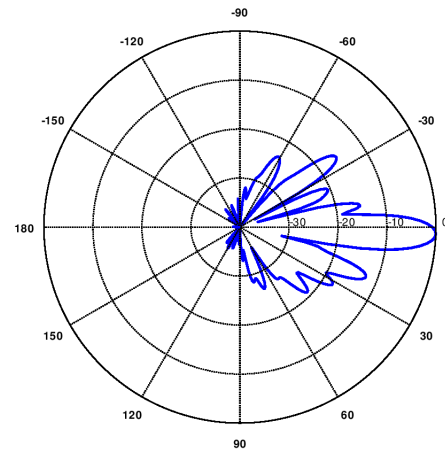
763 MHz

Manufacturer: CCI
 Model #: TPA65R-BU8D
 Frequency Band: 698-806 MHz
 Gain: 15.6 dBi
 Vertical Beamwidth: 9.5°
 Horizontal Beamwidth: 74°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 20.7" x 7.7"



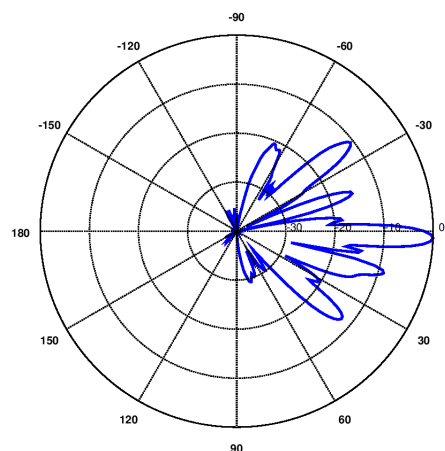
885 MHz

Manufacturer: CCI
 Model #: DMP65R-BU8DA
 Frequency Band: 824-896 MHz
 Gain: 16.0 dBi
 Vertical Beamwidth: 8.0°
 Horizontal Beamwidth: 64°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 20.7" x 7.7"



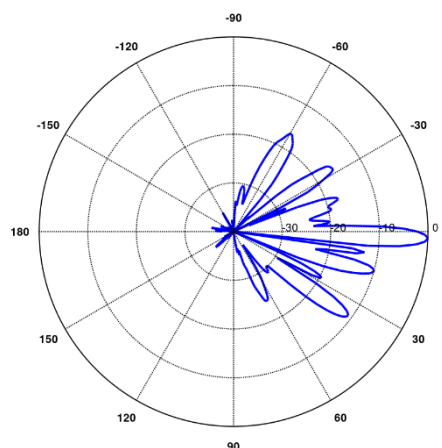
1900 MHz

Manufacturer: CCI
 Model #: DMP65R-BU8DA
 Frequency Band: 1910-2180 MHz
 Gain: 17.8 dBi
 Vertical Beamwidth: 5.1°
 Horizontal Beamwidth: 68°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 20.7" x 7.7"



2100 MHz

Manufacturer: CCI
 Model #: TPA65R-BU8D
 Frequency Band: 1920-2180 MHz
 Gain: 18.3 dBi
 Vertical Beamwidth: 4.7°
 Horizontal Beamwidth: 67°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 20.7" x 7.7"



ATTACHMENT 8

Viewshed Analysis Report

Proposed Wireless Telecommunications Facility:

CT2246 Salisbury
106 Sharon Road
Lakeville, CT 06039



- Proposed new 94 ft AGL Monopole Antenna Structure
- Viewshed map completed 11/18/2020
- Balloon test completed 9/25/19

Viewshed analysis maps and representations contained herein depict where proposed facility may potentially be visible based on the best data available and site conditions at the time data was collected. This study does not claim to depict all locations from where the facility may be potentially visible.



Introduction

At the request of SAI Communications, LLC, and AT &T, Virtual Site Simulations, LLC (VSS) was contracted to provide a Viewshed Analysis Report for a proposed monopole type telecommunications facility located at 106 Sharon Road, Lakeville, CT 06039. Hereafter referred to as “the Site”. The proposed tower facility would contain a 94 foot above ground level (“AGL”) monopole type antenna structure, with a maximum appurtenance height of 100 Ft. AGL that includes one 6 ft lighting rod (optional) located at the top of the structure. Associated unmanned equipment will be contained within an approximately 50 ft x 50 ft fenced gravel equipment compound located due south of the existing building located on the property.

Site Description and Setting

The proposed Monopole type telecommunications facility is located on a 11.52 Acre property designated by the tax assessor as Map 47 Lot 9, owned by Wake Robin, LLC. The Site is approximately .53 miles south east of Ct. Route 44 at intersection of Route 41, Sharon Road. The site is located within a mostly rural/residential/farmland area and the subject property contains an existing multi-story 38 room Inn (The Wake Robin Inn). The proposed telecommunications compound is within an existing forested area behind an existing structure, along the Southern side of the property.

Development surrounding this area is a mix of forested areas and residential houses to the south, farmland and rural residences to east, with mainly residential areas to the north and west. The Wononskupomuc Lake is approximately .18 miles to the west at its nearest point. The Saint Mary’s Catholic Church is approximately .25 miles to the northwest at its nearest point. The Salisbury Central School is approximately .91 +/- Miles to north. The Hotchkiss School is .7 miles to the south at its closest point and contains a daycare facility that is .9 miles to the southwest of the proposed tower. There are no CT Blue Blazed Trails within the study area. There are no schools or licensed daycare facilities within 250 ft of the proposed facility.

Methodology

Determination of Study Area

In order to complete this analysis a study area must first be determined. For this site, a one-mile study area (2010.6 acre) was selected based on years of experience in modeling the visibility of telecommunication structures. Typical views from beyond this distance, in this type of Topography, are distant and partially obscured and are therefore omitted from the analysis. This is done to focus on areas within the defined study area that will have a larger visual impact.

The Viewshed Analysis was conducted within the predefined study area using two different methods: computer modeling and on-site observation. Each method was used to verify the results of the other, providing the best possible prediction of locations that will have views of proposed telecommunications facility.

Note: Balloon Test was conducted during leaf-on conditions therefore leaf-off viewshed results could not be verified.

Computer Modeling – Data Processing

Once the study area is selected, a combination of Ortho Image based, and Lidar based datasets are assembled.

Ortho Imagery is remotely sensed imagery that has been geometrically corrected. This geometric correction, or orthorectification, is required to adjust for lens distortion, camera tilt, and topographical relief. An orthorectified image is an extremely accurate view of the surface of the Earth. This allows for the measurement of true distance, precise digitization, and the exact placement of geographic symbols and analysis results.

LiDAR, or light detection ranging is a remote sensing method that maps structure including vegetation height, density and other characteristics across a region. Think of it as radar using laser light instead of radio waves. LiDAR directly measures the height and density of vegetation on the ground as well as the bare-earth topology.

The datasets are clipped to the study area and processed to create the 3d models necessary to perform this analysis. For Leaf On/Leaf off analysis three different models need to be created:

- 1. A Digital Elevation Model ("DEM")- a 3d model of existing bare earth topography (i.e. no surface features, like trees and buildings)**
- 2. A Leaf-On Digital Surface Model ("DSM ") - a 3d model of existing topography that includes all surface features measured (i.e. building and trees)**
- 3. A Leaf-Off Digital Surface Model- a 3d model of existing topography that includes all surface features measured with specific analysis done to remove datapoints from deciduous trees/bushes (see Leaf Off considerations section below).**

It is important to note that by using lidar data to create these models, building heights, existing tree canopy heights and other land cover is not averaged or assumed but measured from lidar dataset. Several different software packages are used in this processing, most notably, ESRI ArcGIS platform is used to interpret Lidar data, perform image analysis and create a Digital Surface Model ("DSM ") and a corresponding Digital Elevation Model ("DEM"). These datasets are then used to perform a viewshed analysis.

Image Analysis Leaf Off considerations

In cases where Leaf Off analysis is necessary, an extra step is required to adjust DSM to remove leaves. There are many different methods that can be used to perform this analysis. Image analysis of Ortho Imagery taken at the same time as lidar measurement data was chosen as the best approximation for the purposes of this analysis. It has been proven to yield a reasonable approximation of what views would be likely in the leaf off condition. This analysis is used to differentiate between deciduous and non-deciduous (coniferous) trees and ground cover.

Once completed the calculated deciduous areas are removed from the DSM. This Leaf Off DSM is then used to perform the Leaf Off viewshed analysis.

Viewshed Analysis- IVSview®

The primary software used for the viewshed analysis is IVSview® VVS, LLC's proprietary Interactive Viewshed Analysis Tool. This software allows the user to perform viewshed analysis on imported maps and datasets on multiple levels at the same time. These calculations determine not only if the tower will be seen, but also how much of the tower will be visible from those locations. The IVSview® results have been field verified at thousands of locations with all topography types (i.e. urban, rural, mixed etc..) throughout New England. And, when compared to other viewshed analysis software packages, it has proven to provide a more realistic comprehensive representation of potential views.

The datasets are imported as layers within the software mapping program. Once imported, spatial analysis tools are used to evaluate each position within those layers from which the proposed facility may be visible. These tools allow for the input of viewing reference height (assumed to be 5 Ft AGL) and tower height(s). The tools also consider any layers that have been imported that may affect viewing location (i.e. topography, tree canopy, ground cover, buildings, roads etc.) IVSview® is then applied, and visibility models are created. The results of this computer model are then graphically layered on topographic and aerial maps.

These maps can be found in Attachment A.

On-site Observation & Documentation

A balloon test was conducted on Wednesday, September 25th, 2019 and used as the visual reference for site observations from random locations throughout the study area. Note: The balloon test was conducted at 104 Ft AGL. The balloon test consisted of flying a 3 Ft. diameter helium filled balloon to the top elevation of the proposed tower. Balloon diameter was measured using a custom set of calipers. A red balloon was used to provide the best contrast between it and surrounding sky or vegetation. The balloon was tethered to the location of the proposed tower, and its elevation was set by measuring the length of the tether. The elevation was verified using the Lieca DISTO D2 Laser distometer.

Balloon test accuracy is very wind dependent. The balloon test was therefore scheduled on a day with wind conditions below the accepted threshold of 10mph. A preliminary viewshed analysis was done using the method outlined above to determine what areas were predicted to have views of the proposed site and to verify the computer model. Drive-by visual reconnaissance of the Study Area was then conducted using the preliminary viewshed analysis as a guide. Locations where the Balloon was visible and not visible were photo documented and a GPS track of reconnaissance areas was made. Reconnaissance areas were limited to public areas/roads, no private property was used in the on-site observations of this test.

Photo documentation of this test was accomplished using a Nikon P900 16Mp digital camera set to use a 50mm focal length^{1 2}. The Nikon P900 was chosen because it has built-in XMP metadata files that embed the GPS location, light conditions and bearing to target within the image source data file. These photos document the necessary location and bearing data to ensure the accuracy of simulation location. This documentation was then incorporated into a computer model prediction. The on-site observations were used to adjust model assumptions made in 3d model as necessary.

Photographic Documentation

A number of photographs were chosen from the on-site documentations photos and used to prepare photorealistic simulations of the proposed telecommunications facility. GPS coordinates and bearing information recorded within the XMP metadata file of the documentation photos was used to generate virtual camera positions within a 3d model. The balloon in the documentation photos was used as a spatial reference to verify the proportions and height of the proposed tower. Site plan information, field observations and 3D models were then used in these simulations to portray relative scale and location of the proposed structure. The photo simulations were then created using a combination of the 3d model and photo rendering software. These simulations and the existing site photographs provided for reference are attached.

¹ "The lens that most closely approximates the view of the unaided human eye is known as the normal focal length lens. For the 35 mm camera format, which gives an 24 x 35mm image, the normal focal length is about 50mm" Warren Bruce Photography, West Publishing Company, Egan, MN c 1993 (page 70)

² 50 mm focal length is based on 35mm film photography. Since Digital photographic sensors are not the same size as 35mm film ALL digital photography focal lengths must be corrected

Twenty-nine photographs were used for simulations and documentation. These Simulations and documentation photos are plotted on the viewshed analysis map attached and shown in the Photo Simulation Package (Attachment B)

Visibility Analysis Results

The results of the of viewshed analysis for the proposed telecommunications facility are provided on the visibility analysis maps attached at the end of this report within Attachment A. The maps are provided in two ways, one set of maps comparing leaf-on, leaf-off conditions (single color for each) and a second set of maps showing proposed total visibility by height (IVSview® multi-level viewshed) as an overview.

Year-Round Visibility:

Predicted estimate of year-round views (Summer, leaf-on condition) of the proposed tower facility are from approximately 248.1 acres or approximately 12.34 % of the 1-mile radius 2010.6 Acre study area. The majority of these views (233.87 acres or +/- 94%) are contained within the Wononskupomuc Lake waterway that is .18 miles to the west of the proposed facility. The majority of these specific views are predicted to be of the upper 50% of the tower (see Attachment A - IVSview® for multi-level viewshed leaf-on prediction)

In situations where there is a large amount of open water views, it is typical to provide viewshed maps and calculations with the on-water views included and removed. This is done to provide a clearer understanding of how each type of visibility will affect the general public.

Predicted estimate of year-round views (Summer, leaf-on condition) of the proposed tower facility with Wononskupomuc Lake waterway views removed are from approximately 14.23 acres or approximately .7 % of the 1-mile radius study area.

These specific views are concentrated in two main areas of visibility. A 3.6 Acre area farmland/residential area of predicted visibility along Wells Hill Road 550 ft to the east-northeast of the proposed site, and a 6.1 Acre grassy area within the Hotchkiss School property, along Meadow Street and Whittle Street. The majority of views from these specific areas are predicted to be of the upper most 25% or +/- 23 ft of the tower. The remaining 4.73 Acres of visibility are scattered in small areas of visibility (less than 500 sq ft) to the north, southwest and east that are more than .5 miles from the site. The views from these areas are predicted to be intermittent, distant and obscured by existing foliage.

Near-view leaf-on visibility (less than ¼ mile from site) occurs within residential property immediately across Wells Hill Road to the east (58 Wells Hill Road). Specific views from this property are predicted to be of upper 23 Ft of tower. (see - IVSview® 1000 ft leaf-on prediction)

Seasonal Visibility:

Predicted estimate seasonal views (Winter, leaf-off condition) of the proposed facility are from an additional 27.30 acres (an additional 1.36 %). Total predicted seasonal views 275.3 Acres (13.70 %). To be consistent, additional maps and calculations are provided with the Wononskupomuc Lake waterway views removed.

Predicted estimate of seasonal views (Winter, leaf off condition) of the proposed facility with Wononskupomuc Lake waterway views removed are from an additional 15.0 acres (an additional .75 %).

The majority of these additional leaf-off views are along the edges of predicted leaf-on visibility with notable additional areas of leaf-visibility in areas to the north, southwest and east that are more than .5 miles from the site. The views from these specific areas are predicted to be intermittent, distant and partially obscured by existing ground cover.

Additional near-view visibility (less than ¼ mile from site) occurs mainly within the subject property with some predicted views from rear of the abutting residential property immediately to the north west of the site (51 Wells Hill Road) and from area within residential property across Wells Hill Road to the east (58 Wells Hill Road). (see - IVSview® 1000 ft leaf-off prediction)

Documentation

Sources used for Visibility Analysis located at:

**CT2246 Salisbury
106 Sharon Road
Lakeville, CT 06039**

Maps and datasets /consulting documents:

United States Geological Survey - USGS Topographical quadrangles (2011-2012)

National Resource Conservation Service -NAIP aerial photography (2010, 2012)

CRCOG Ortho-imagery – (2017)

UCONN- Center for Land Use Education and Research

- **LiDAR data (2016)**

DEEP- Connecticut Department of Energy and Environmental Protection

- **Open Space (2010)**
- **DEEP Property (2017)**
- **Historic Places (2008)**

United States Census (2010) – Landmark Polygon Features

Connecticut Forest & Park Association (CFPA) – Blue Blazed Trails (2016)

Connecticut.Gov eLicensing Website – Child Daycare & Group Daycare Homes Roster (2017)

Environmental Systems Research Institute Inc (ERSI) – CT state boundaries/counties (2010)

Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

Limitations:

This report and the analysis herein does not claim to depict all locations, or the only locations from which the proposed facility will be visible; it is intended to provide a representation of those areas where proposed facility is likely to be visible.

Attachment A-Viewshed Mapping Package

Proposed Wireless Telecommunications Facility:

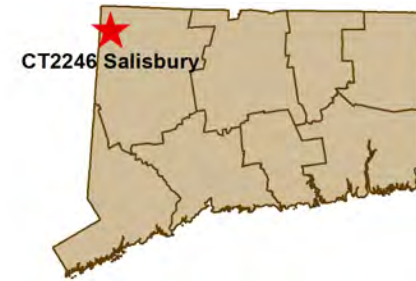
CT2246 Salisbury
106 Sharon Road
Lakeville, CT 06039

- Proposed new 94.0 ft AGL antenna structure
- Viewshed map completed 11/18/2020

Package prepared by:

Virtual Site Simulations, LLC
24 Salt Pond Road
Suite C3
South Kingstown, Rhode Island 02879

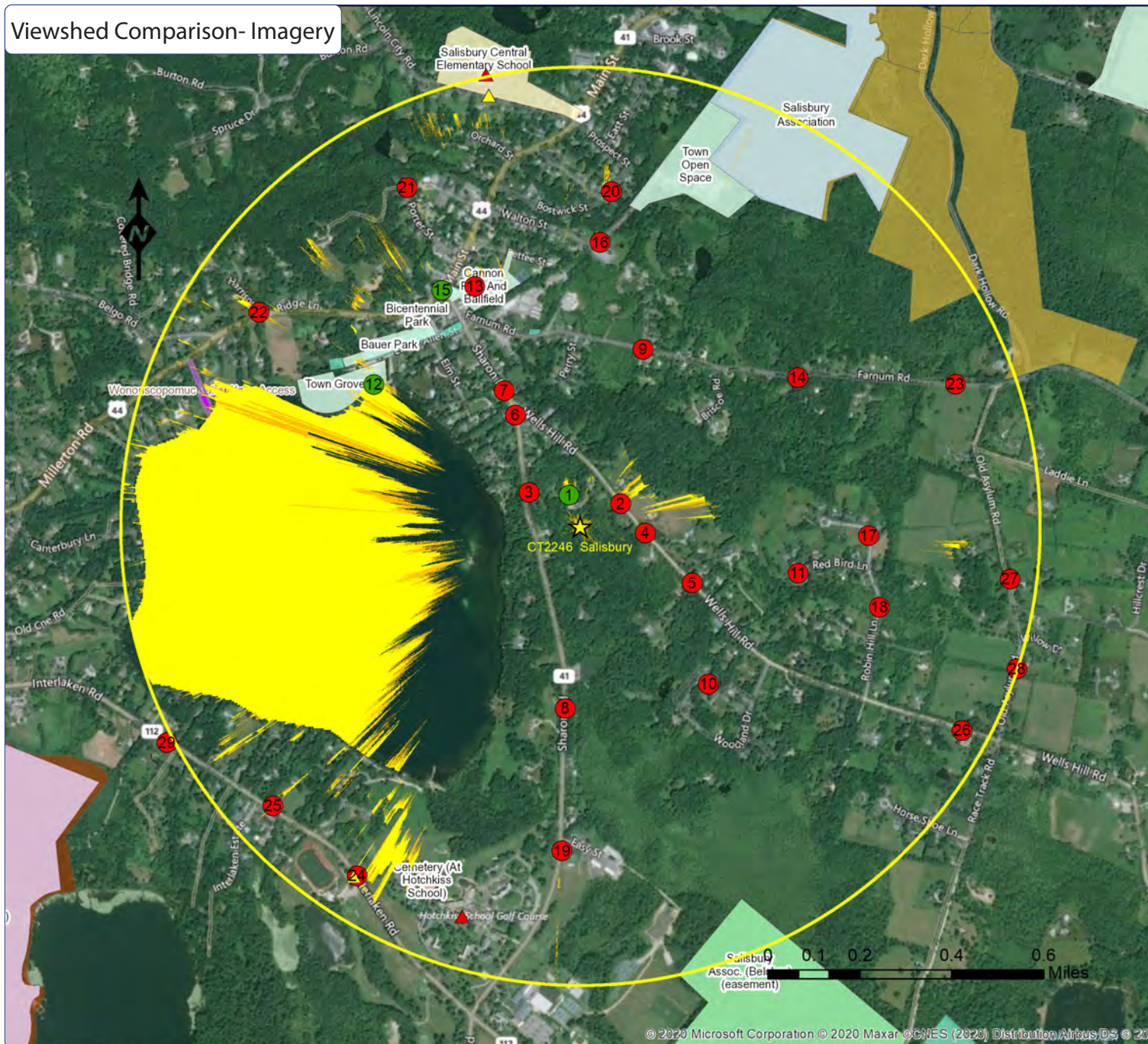
www.VirtualSiteSimulations.com
www.ThinkVSSFirst.com



Viewshed analysis maps and representations contained herein depict where proposed facility may potentially be visible based on the best data available and site conditions at the time data was collected. This study does not claim to depict all locations from where the facility may be potentially visible.



Viewshed Comparison- Imagery



Proposed Facility:

CT2246 Salisbury

106 Sharon Road

Lakeville, CT 06039

☆ Facility Location ○ 1 Mile Radius

- ⊗ Photo location -Balloon visible- Year Round
- ⊗ Photo location -Balloon visible- Seasonal
- ⊗ Photo location -Balloon NOT visible
- ▲ School Facilities ▲ Daycare Facilities
- CT Open Space (Conservation Land)
- CT Open Space (Municipal Land)
- CT Open Space (State Land)
- Predicted Visibility-Year Round(Leaf On)
- Predicted Visibility-Seasonal(Leaf Off)

Statistics:

PROJ_DESC=Geographic (Lat/Long) / WGS84 / arc degrees
 PROJ_DATUM=WGS84 PROJ_UNITS=arc degrees
 PIXEL WIDTH=0.0000013 arc degrees (+/- .6 ft)
 PIXEL HEIGHT=0.0000014 arc degrees (+/- .6 ft)
 RADIUS (FT)= 1 Mile
 TRANSMITTER_HEIGHT (Ft-AGL)= 94
 RECEIVER_HEIGHT (Ft-AGL)= 5 Ft
 PERCENT_VISIBLE (%) Year Round (Leaf On)= 12.34% 248.1 Acres
 PERCENT_VISIBLE (%) Seasonal (Leaf Off)= 13.70% 275.4 Acres

Notes:

- map compiled by VSS, LLC on : 11/18/2020
- Tower location(lat/long NAD 83):41.957203 -73.434994
- Data Sources noted on documentation page attached

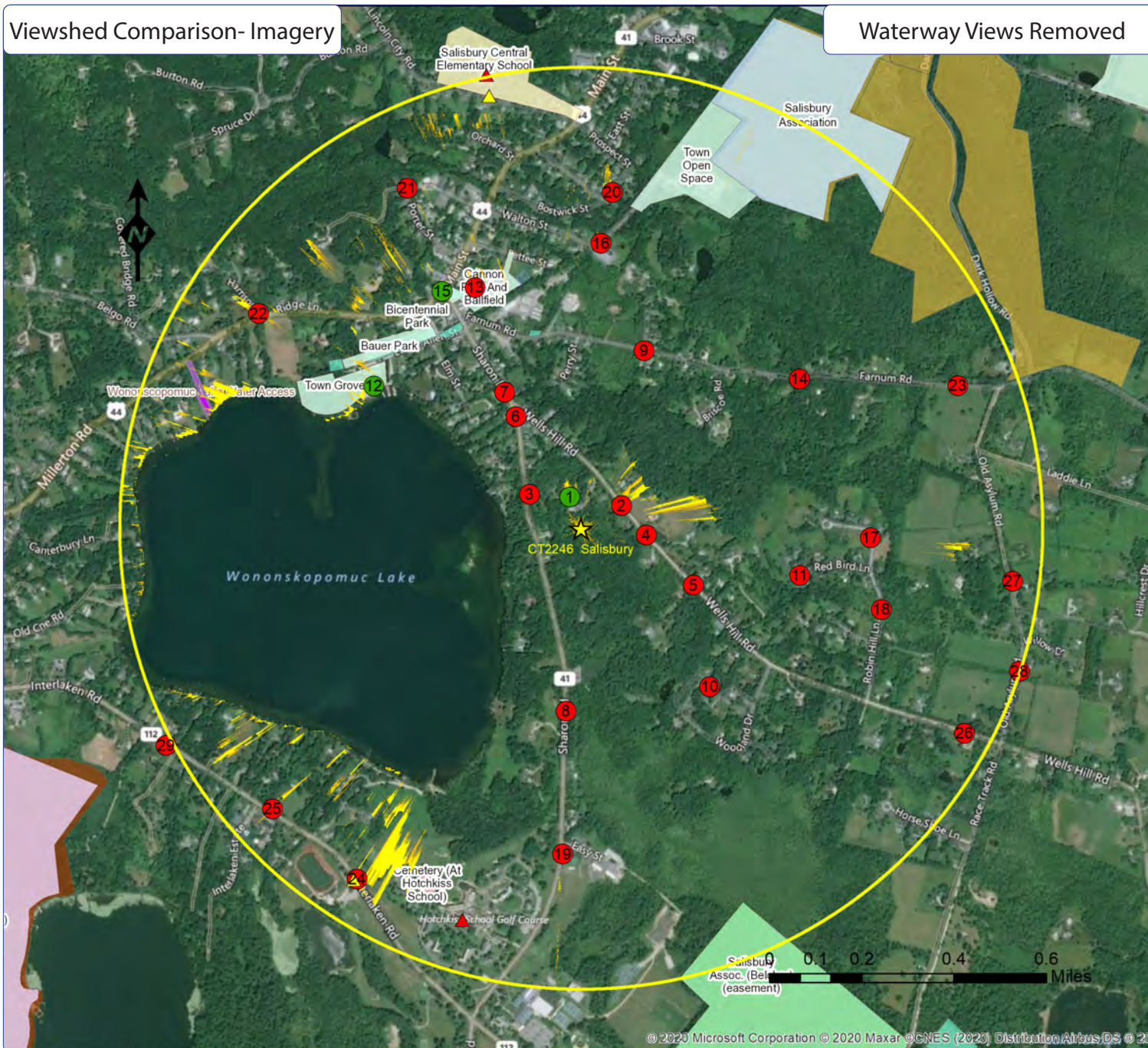


Viewshed analysis maps and representations contained herein depict where proposed facility may potentially be visible based on the best data available and site conditions at the time data was collected. This study does not claim to depict all locations from where the facility may be potentially visible.



Viewshed Comparison- Imagery

Waterway Views Removed



Proposed Facility:

CT2246 Salisbury

106 Sharon Road

Lakeville, CT 06039

☆ Facility Location ○ 1 Mile Radius

- ⊗ Photo location -Balloon visible- Year Round
- ⊗ Photo location -Balloon visible- Seasonal
- ⊗ Photo location -Balloon NOT visible
- ▲ School Facilities ▲ Daycare Facilities
- CT Open Space (Conservation Land)
- CT Open Space (Municipal Land)
- CT Open Space (State Land)
- Predicted Visibility-Year Round(Leaf On)
- Predicted Visibility-Seasonal(Leaf Off)

Statistics:

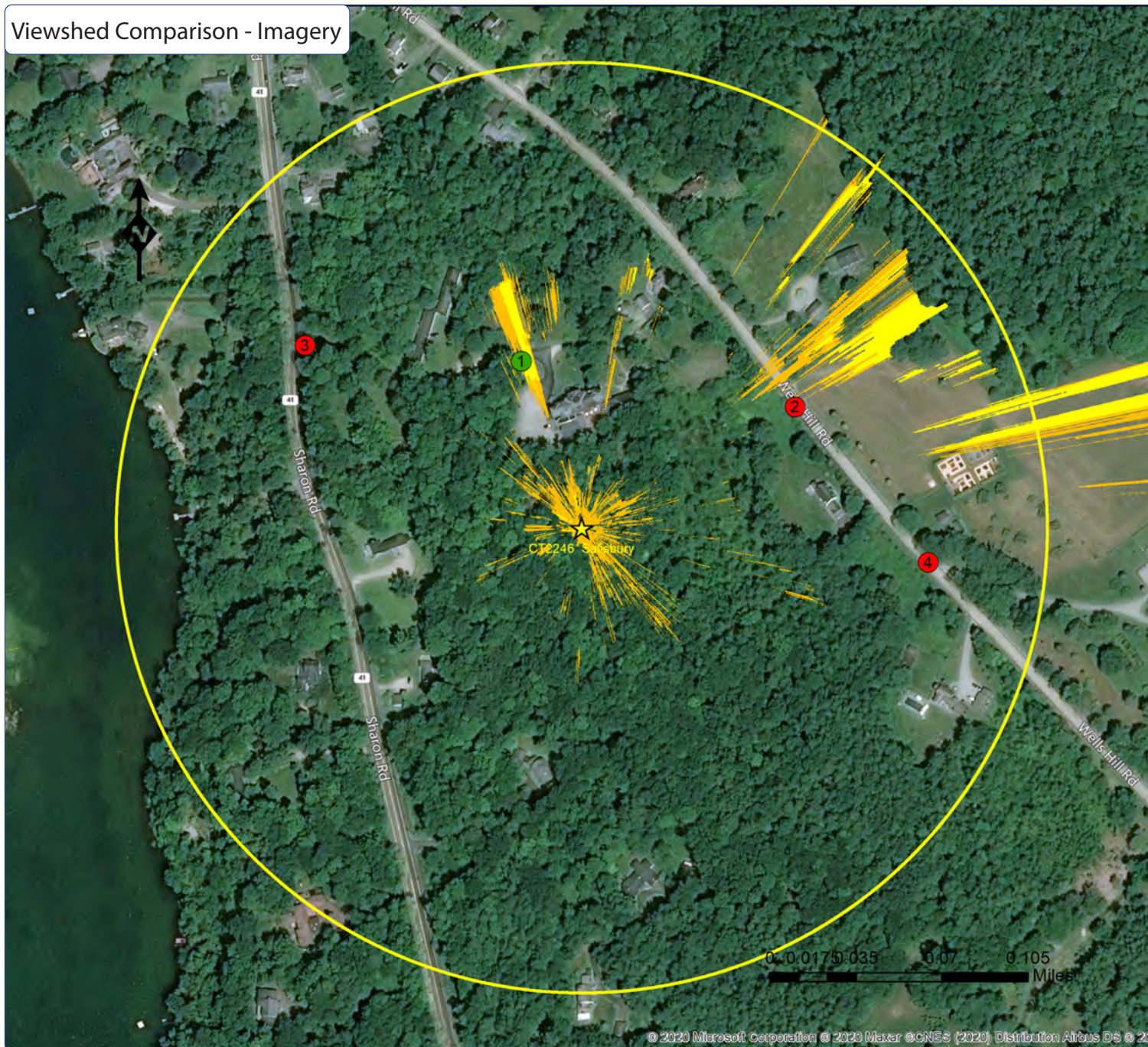
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 PROJ_DATUM=WGS84 PROJ_UNITS=arc degrees
 PIXEL WIDTH=0.0000013 arc degrees (+/- .6 ft)
 PIXEL HEIGHT=0.0000014 arc degrees (+/- .6 ft)
 RADIUS (FT)= 1 Mile
 TRANSMITTER_HEIGHT (Ft-AGL)= 94
 RECEIVER_HEIGHT (Ft-AGL)= 5 Ft
 PERCENT_VISIBLE (%) Year Round (Leaf On)= 0.7% 14.23 Acres
 PERCENT_VISIBLE (%) Seasonal (Leaf Off)= 1.45% 29.23 Acres
 Notes:
 - map compiled by VSS, LLC on : 11/18/2020
 - Tower location(lat/long NAD 83):41.957203 -73.434994
 - Data Sources noted on documentation page attached



Viewshed analysis maps and representations contained herein depict where proposed facility may potentially be visible based on the best data available and site conditions at the time data was collected. This study does not claim to depict all locations from where the facility may be potentially visible.



Viewshed Comparison - Imagery



Proposed Facility:

CT2246 Salisbury

106 Sharon Road

Lakeville, CT 06039

☆ Facility Location ○ 1000 ft Radius

⊗ Photo location -Balloon visible- Year Round

⊗ Photo location -Balloon visible- Seasonal

⊗ Photo location -Balloon NOT visible

▲ School Facilities ▲ Daycare Facilities

■ CT Open Space (Conservation Land)

■ CT Open Space (Municipal Land)

■ CT Open Space (State Land)

■ Predicted Visibility-Year Round(Leaf On)

■ Predicted Visibility-Seasonal(Leaf Off)

Statistics:

PROJ_DESC=Geographic (Lat/Long) / WGS84 / arc degrees

PROJ_DATUM=WGS84 PROJ_UNITS=arc degrees

PIXEL WIDTH=0.0000013 arc degrees (+/- .6 ft)

PIXEL HEIGHT=0.0000014 arc degrees(+/- .6 ft)

RADIUS (FT)= 1000 Feet

TRANSMITTER_HEIGHT (Ft-AGL)= 94

RECEIVER_HEIGHT (Ft-AGL)= 5 Ft

PERCENT_VISIBLE (%) Year Round (Leaf On)= 12.34% 248.1 Acres

PERCENT_VISIBLE (%) Seasonal (Leaf Off)= 13.70% 275.4 Acres

Notes:

- map compiled by VSS, LLC on : 11/18/2020

- Tower location(lat/long NAD 83):41.957203 -73.434994

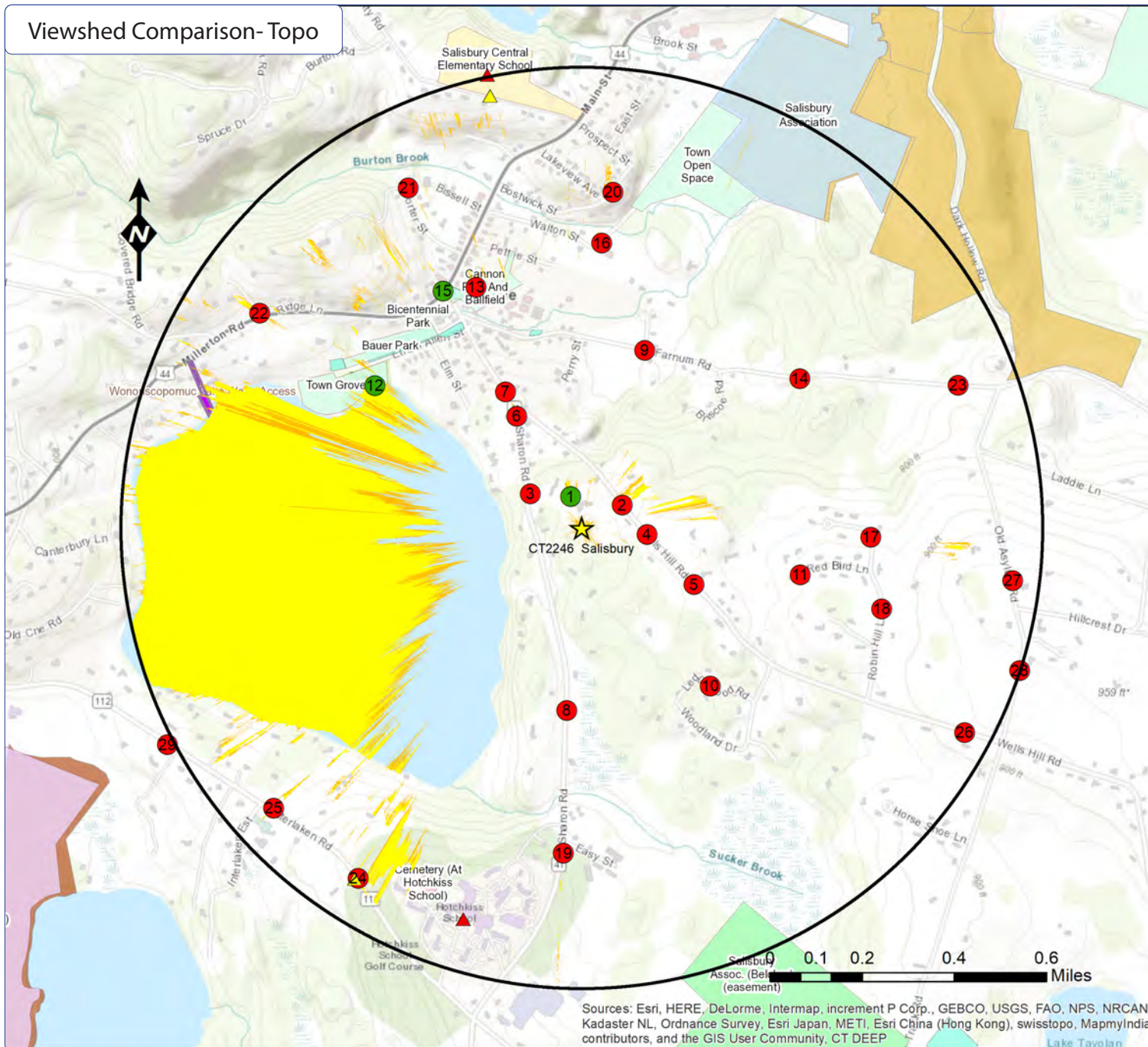
- Data Sources noted on documentation page attached



Viewshed analysis maps and representations contained herein depict where proposed facility may potentially be visible based on the best data available and site conditions at the time data was collected. This study does not claim to depict all locations from where the facility may be potentially visible.



Viewshed Comparison-Topo



Proposed Facility:

CT2246 Salisbury

106 Sharon Road

Lakeville, CT 06039

☆ Facility Location ○ 1 Mile Radius

- ⊗ Photo location -Balloon visible- Year Round
- ⊗ Photo location -Balloon visible- Seasonal
- ⊗ Photo location -Balloon NOT visible
- ▲ School Facilities ▲ Daycare Facilities
- CT Open Space (Conservation Land)
- CT Open Space (Municipal Land)
- CT Open Space (State Land)
- Predicted Visibility-Year Round(Leaf On)
- Predicted Visibility-Seasonal(Leaf Off)

Statistics:

PROJ_DESC=Geographic (Lat/Long) / WGS84 / arc degrees

PROJ_DATUM=WGS84 PROJ_UNITS=arc degrees

PIXEL WIDTH=0.0000013 arc degrees (+/- .6 ft)

PIXEL HEIGHT=0.0000014 arc degrees(+/- .6 ft)

RADIUS (FT)= 1 Mile

TRANSMITTER_HEIGHT (Ft-AGL)= 94

RECEIVER_HEIGHT (Ft-AGL)= 5 Ft

PERCENT_VISIBLE (%) Year Round (Leaf On)= 12.34% 248.1 Acres

PERCENT_VISIBLE (%) Seasonal (Leaf Off)= 13.70% 275.4 Acres

Notes:

- map compiled by VSS, LLC on : 11/18/2020

- Tower location(lat/long NAD 83):41.957203 -73.434994

- Data Sources noted on documentation page attached

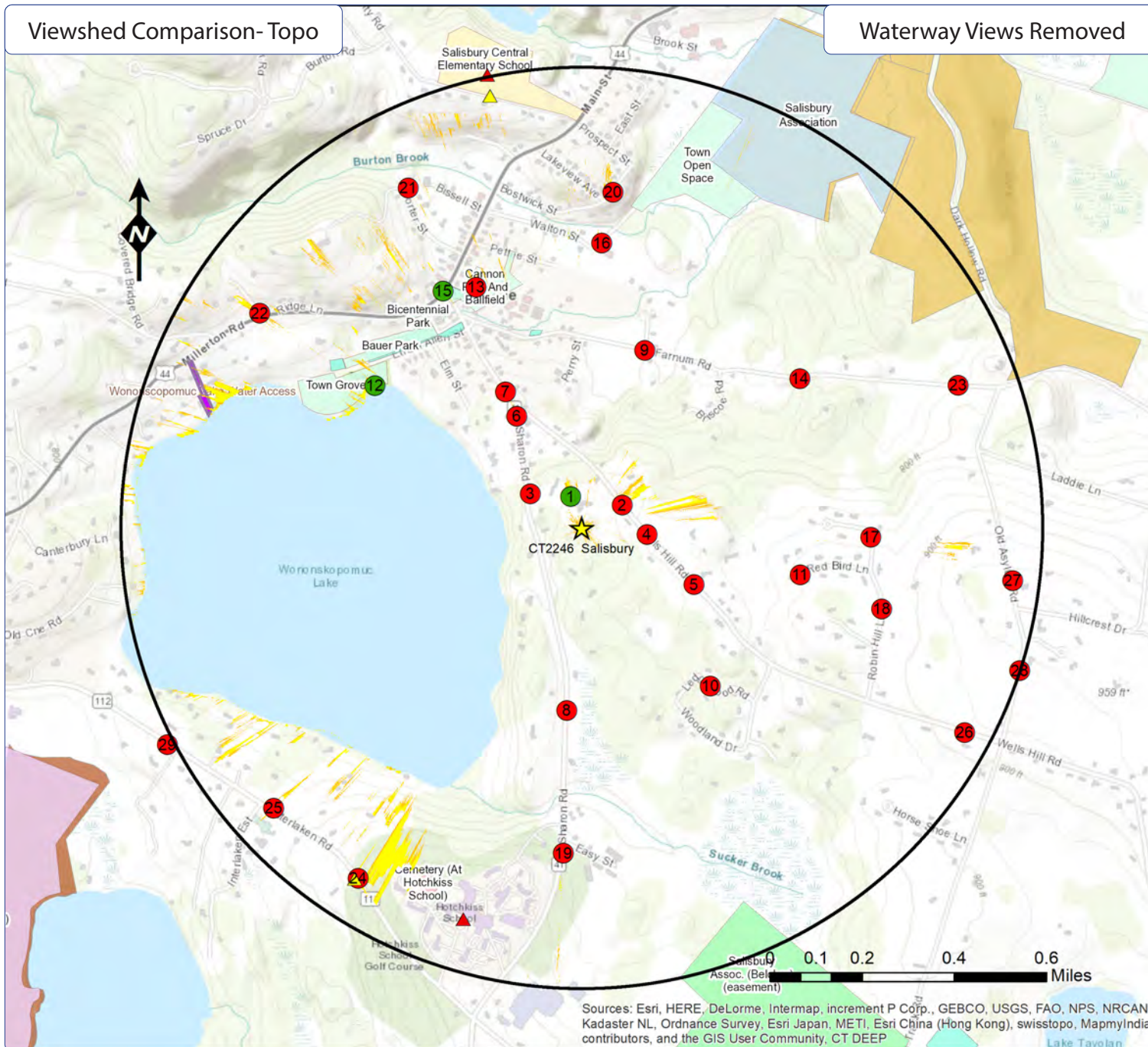


Viewshed analysis maps and representations contained herein depict where proposed facility may potentially be visible based on the best data available and site conditions at the time data was collected. This study does not claim to depict all locations from where the facility may be potentially visible.



Viewshed Comparison-Topo

Waterway Views Removed



Proposed Facility:

CT2246 Salisbury

106 Sharon Road

Lakeville, CT 06039

☆ Facility Location ○ 1 Mile Radius

- ⊗ Photo location -Balloon visible- Year Round
- ⊗ Photo location -Balloon visible- Seasonal
- ⊗ Photo location -Balloon NOT visible
- ▲ School Facilities ▲ Daycare Facilities
- CT Open Space (Conservation Land)
- CT Open Space (Municipal Land)
- CT Open Space (State Land)
- Predicted Visibility-Year Round(Leaf On)
- Predicted Visibility-Seasonal(Leaf Off)

Statistics:

PROJ_DESC=Geographic (Lat/Long) / WGS84 / arc degrees

PROJ_DATUM=WGS84 PROJ_UNITS=arc degrees

PIXEL WIDTH=0.0000013 arc degrees (+/- .6 ft)

PIXEL HEIGHT=0.0000014 arc degrees(+/- .6 ft)

RADIUS (FT)= 1 Mile

TRANSMITTER_HEIGHT (Ft-AGL)= 94

RECEIVER_HEIGHT (Ft-AGL)= 5 Ft

PERCENT_VISIBLE (%) Year Round (Leaf On)= 0.7% 14.23 Acres

PERCENT_VISIBLE (%) Seasonal (Leaf Off)= 1.45% 29.23 Acres

Notes:

- map compiled by VSS, LLC on: 11/18/2020

- Tower location(lat/long NAD 83):41.957203 -73.434994

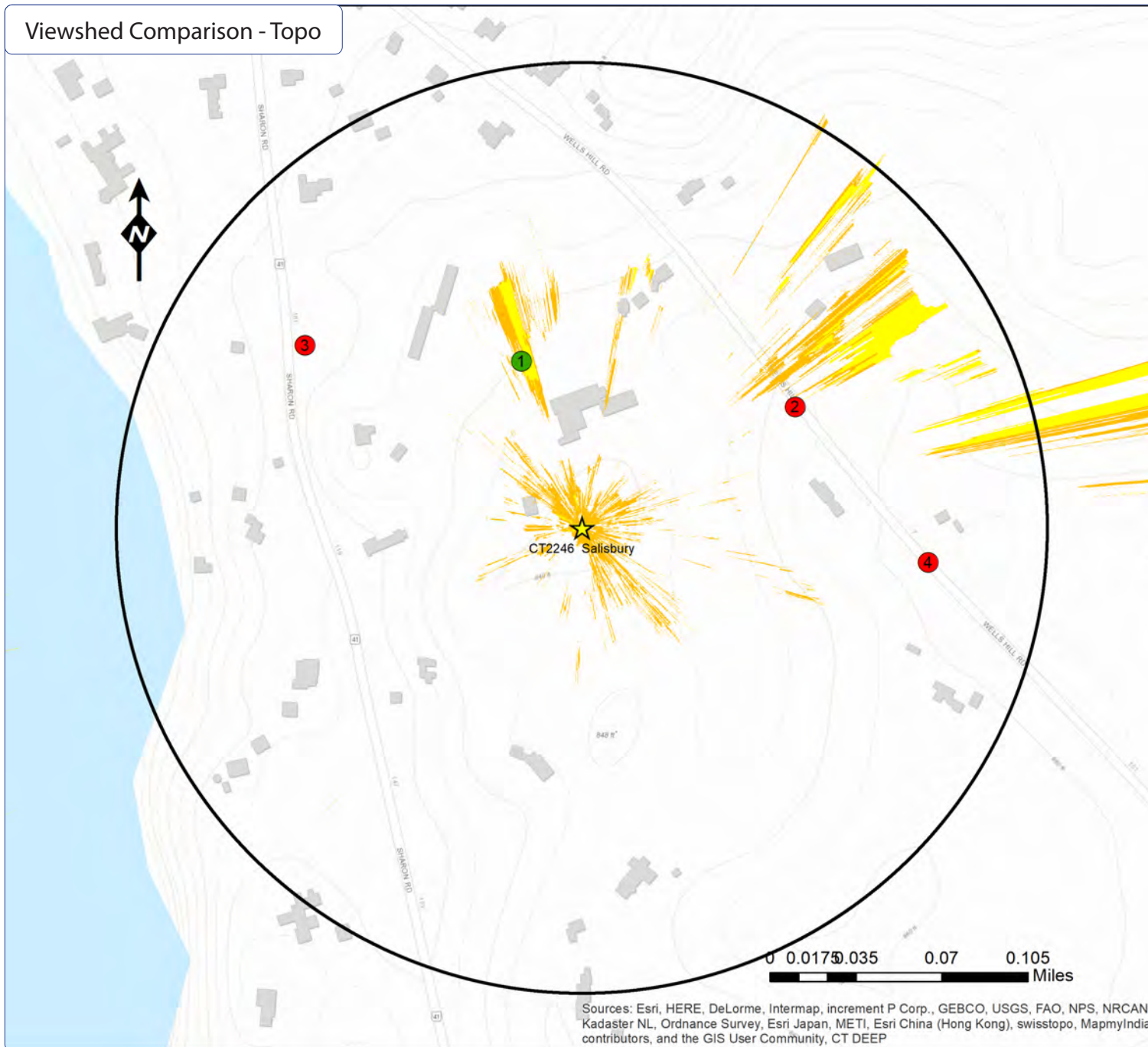
- Data Sources noted on documentation page attached



Viewshed analysis maps and representations contained herein depict where proposed facility may potentially be visible based on the best data available and site conditions at the time data was collected. This study does not claim to depict all locations from where the facility may be potentially visible.



Viewshed Comparison - Topo



Proposed Facility:

CT2246 Salisbury

106 Sharon Road

Lakeville, CT 06039

☆ Facility Location ○ 1000 ft Radius

- ⊗ Photo location -Balloon visible- Year Round
- ⊗ Photo location -Balloon visible- Seasonal
- ⊗ Photo location -Balloon NOT visible
- ▲ School Facilities ▲ Daycare Facilities
- CT Open Space (Conservation Land)
- CT Open Space (Municipal Land)
- CT Open Space (State Land)
- Predicted Visibility-Year Round(Leaf On)
- Predicted Visibility-Seasonal(Leaf Off)

Statistics:

PROJ_DESC=Geographic (Lat/Long) / WGS84 / arc degrees
 PROJ_DATUM=WGS84 PROJ_UNITS=arc degrees
 PIXEL_WIDTH=0.0000013 arc degrees (+/- .6 ft)
 PIXEL_HEIGHT=0.0000014 arc degrees(+/- .6 ft)
 RADIUS (FT)= 1000 Feet
 TRANSMITTER_HEIGHT (Ft-AGL)= 94
 RECEIVER_HEIGHT (Ft-AGL)= 5 Ft
 PERCENT_VISIBLE (%) Year Round (Leaf On)= 12.34% 248.1 Acres
 PERCENT_VISIBLE (%) Seasonal (Leaf Off)= 13.70% 275.4 Acres

Notes:

- map compiled by VSS, LLC on : 11/18/2020
- Tower location(lat/long NAD 83):41.957203 -73.434994
- Data Sources noted on documentation page attached

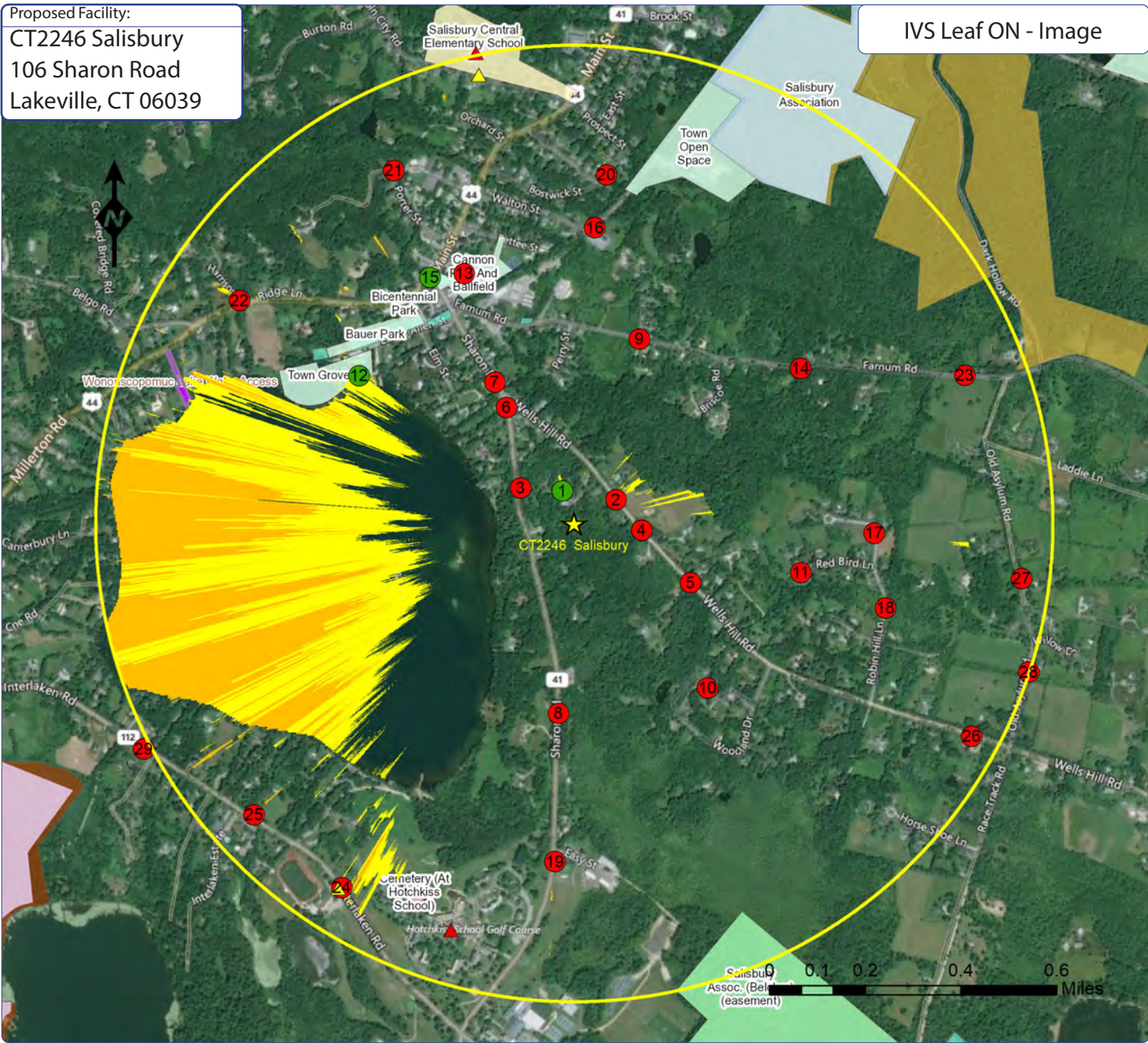


Viewshed analysis maps and representations contained herein depict where proposed facility may potentially be visible based on the best data available and site conditions at the time data was collected. This study does not claim to depict all locations from where the facility may be potentially visible.

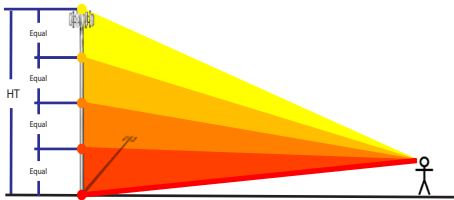


Proposed Facility:
CT2246 Salisbury
 106 Sharon Road
 Lakeville, CT 06039

IVS Leaf ON - Image



IVSview® Color Legend



- ★ Facility Location ○ 1 Mile Radius
- ⓧ Photo location -Balloon visible
 - Year Round Visibility
- ⓧ Photo location -Balloon visible
 - Obstructed Visibility
- ⓧ Photo location -Balloon NOT visible

Tower Visibility			
Color	Location	% Vis	Acres
Yellow	Top 25%	6.91%	139.0
Orange	Top 50%	5.43%	109.1
Light Red	Top 75%	0.00%	0.0
Dark Red	Top 100%	0.00%	0.0
Red	Base	0.00%	0.0
TOTAL		12.34%	248.1 Acres

Statistics:
 PROJ_DESC=Geographic (Lat/Long) / WGS84 / arc degrees
 PROJ_DATUM=WGS84 PROJ_UNITS=arc degrees
 PIXEL WIDTH=0.0000013 arc degrees (+/- .6 ft)
 PIXEL HEIGHT=0.0000014 arc degrees(+/- .6 ft)
 RADIUS (FT)= 1 Mile
 TRANSMITTER_HEIGHT (Ft-AGL)= 94
 RECEIVER_HEIGHT (Ft-AGL)= 5 Ft
 PERCENT_VISIBLE (%) Year Round (Leaf On)= 12.34%
 PERCENT_VISIBLE (%) Seasonal (Leaf Off)= 13.70%
 Notes:
 - map compiled by VSS, LLC on : 11/18/2020
 - Tower location(lat/long NAD 83): 41.957203 -73.434994
 - Data Sources noted on documentation page attached

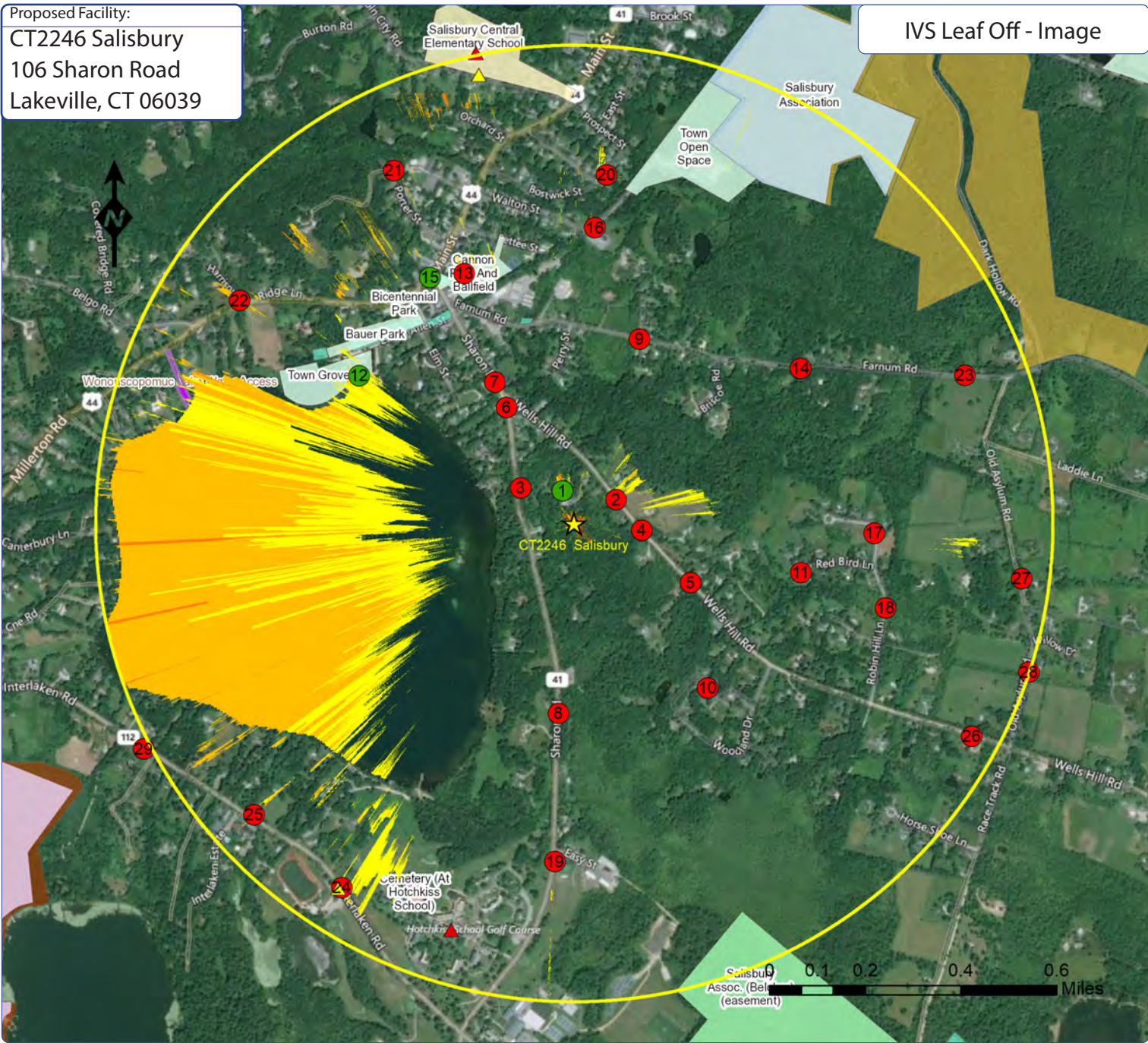


VSS-IVS- Interactive Viewshed Analysis output maps contained herein depict where proposed facility may potentially be visible based on the best and newest data publicly available at the time the data was collected. VSS does not claim to depict all locations from where the facility may potentially be visible and calculated output should be confirmed via site testing as needed.

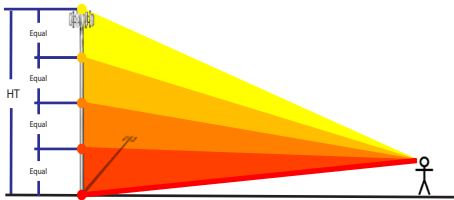


Proposed Facility:
 CT2246 Salisbury
 106 Sharon Road
 Lakeville, CT 06039

IVS Leaf Off - Image



IVSview® Color Legend



★ Facility Location ○ 1 Mile Radius

- ⓧ Photo location - Balloon visible
- Year Round Visibility
- ⓧ Photo location - Balloon visible
- Obstructed Visibility
- ⓧ Photo location - Balloon NOT visible

Tower Visibility			
Color	Location	% Vis	Acres
Yellow	Top 25%	4.62%	92.9
Orange	Top 50%	8.92%	179.4
Red	Top 75%	0.14%	2.8
Red	Top 100%	0.01%	0.1
Red	Base	0.01%	0.2
TOTAL		13.70%	275.4 Acres

Statistics:
 PROJ_DESC=Geographic (Lat/Long) / WGS84 / arc degrees
 PROJ_DATUM=WGS84 PROJ_UNITS=arc degrees
 PIXEL WIDTH=0.0000013 arc degrees (+/- .6 ft)
 PIXEL HEIGHT=0.0000014 arc degrees (+/- .6 ft)
 RADIUS (FT)= 1 Mile
 TRANSMITTER_HEIGHT (Ft-AGL)= 94
 RECEIVER_HEIGHT (Ft-AGL)= 5 Ft
 PERCENT_VISIBLE (%) Year Round (Leaf On)= 12.34%
 PERCENT_VISIBLE (%) Seasonal (Leaf Off)= 13.70%
 Notes:
 - map compiled by VSS, LLC on : 11/18/2020
 - Tower location(lat/long NAD 83): 41.957203 -73.434994
 - Data Sources noted on documentation page attached



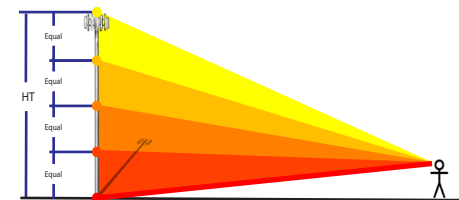
VSS-IVS- Interactive Viewshed Analysis output maps contained herein depict where proposed facility may potentially be visible based on the best and newest data publicly available at the time the data was collected. VSS does not claim to depict all locations from where the facility may potentially be visible and calculated output should be confirmed via site testing as needed.



Proposed Facility:
CT2246 Salisbury
 106 Sharon Road
 Lakeville, CT 06039

IVS Leaf ON - Topo

IVSview® Color Legend



★ Facility Location ○ 1 Mile Radius

- ⊗ Photo location - Balloon visible
- Year Round Visibility
- ⊗ Photo location - Balloon visible
- Obstructed Visibility
- ⊗ Photo location - Balloon NOT visible

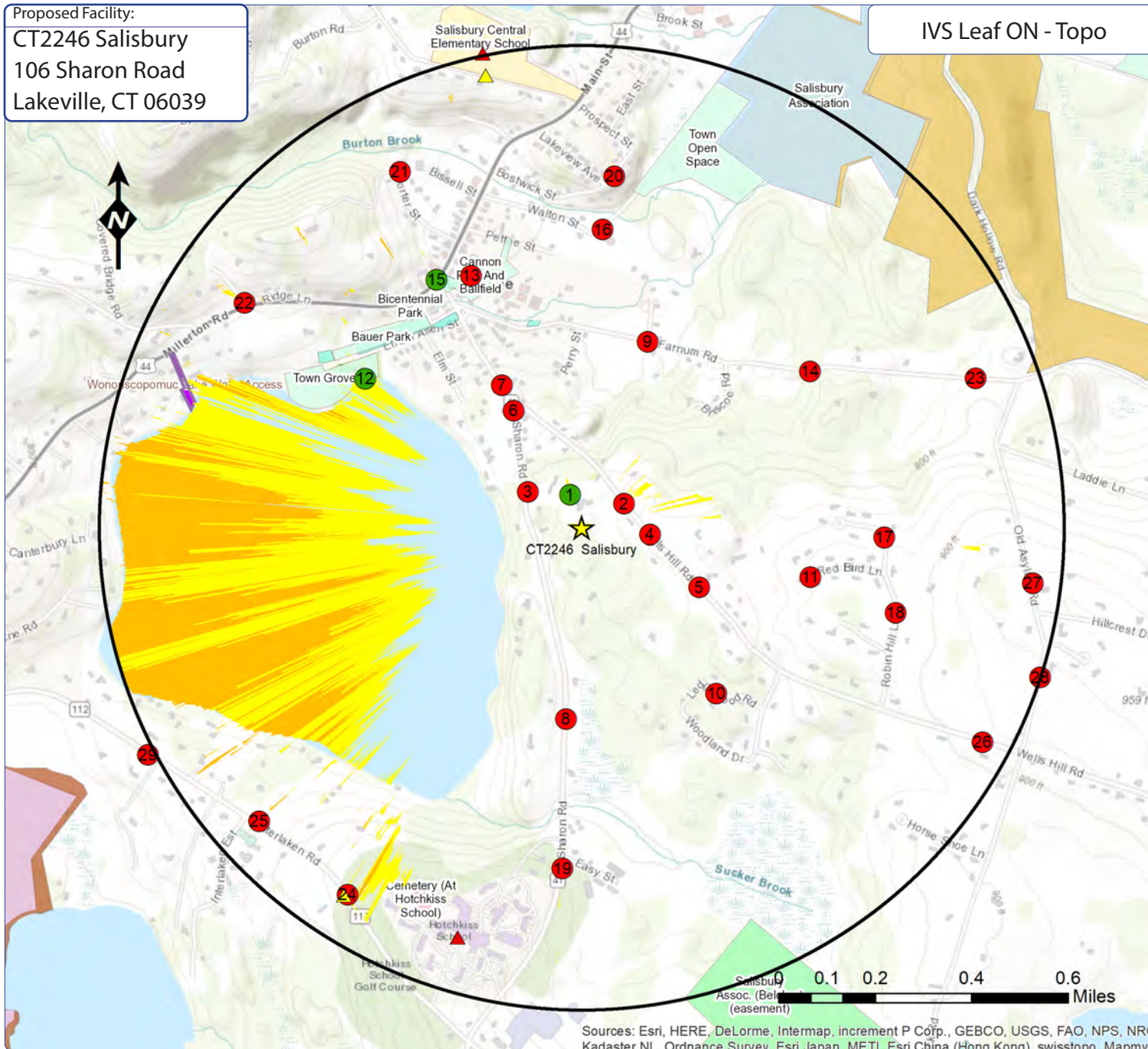
Tower Visibility			
Color	Location	% Vis	Acres
Yellow	Top 25%	6.91%	139.0
Orange	Top 50%	5.43%	109.1
Red	Top 75%	0.00%	0.0
Dark Red	Top 100%	0.00%	0.0
Dark Red	Base	0.00%	0.0
TOTAL		12.34%	248.1 Acres

Statistics:

PROJ_DESC=Geographic (Lat/Long) / WGS84 / arc degrees
 PROJ_DATUM=WGS84 PROJ_UNITS=arc degrees
 PIXEL WIDTH=0.0000013 arc degrees (+/- .6 ft)
 PIXEL HEIGHT=0.0000014 arc degrees (+/- .6 ft)
 RADIUS (FT)= 1 Mile
 TRANSMITTER_HEIGHT (Ft-AGL)= 94
 RECEIVER_HEIGHT (Ft-AGL)= 5 Ft
 PERCENT_VISIBLE (%) Year Round (Leaf On)= 12.34%
 PERCENT_VISIBLE (%) Seasonal (Leaf Off)= 13.70%

Notes:

- map compiled by VSS, LLC on : 11/18/2020
- Tower location(lat/long NAD 83): 41.957203 -73.434994
- Data Sources noted on documentation page attached



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRC, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, Mapbox

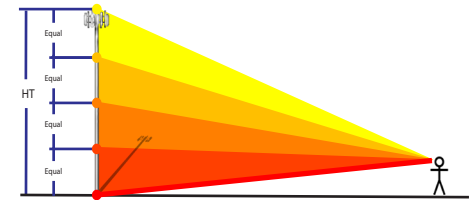
VSS-IVS- Interactive Viewshed Analysis output maps contained herein depict where proposed facility may potentially be visible based on the best and newest data publicly available at the time the data was collected. VSS does not claim to depict all locations from where the facility may potentially be visible and calculated output should be confirmed via site testing as needed.



Proposed Facility:
 CT2246 Salisbury
 106 Sharon Road
 Lakeville, CT 06039

IVS Leaf Off - Topo

IVSview® Color Legend



★ Facility Location ○ 1 Mile Radius

- ⊗ Photo location - Balloon visible
- Year Round Visibility
- ⊗ Photo location - Balloon visible
- Obstructed Visibility
- ⊗ Photo location - Balloon NOT visible

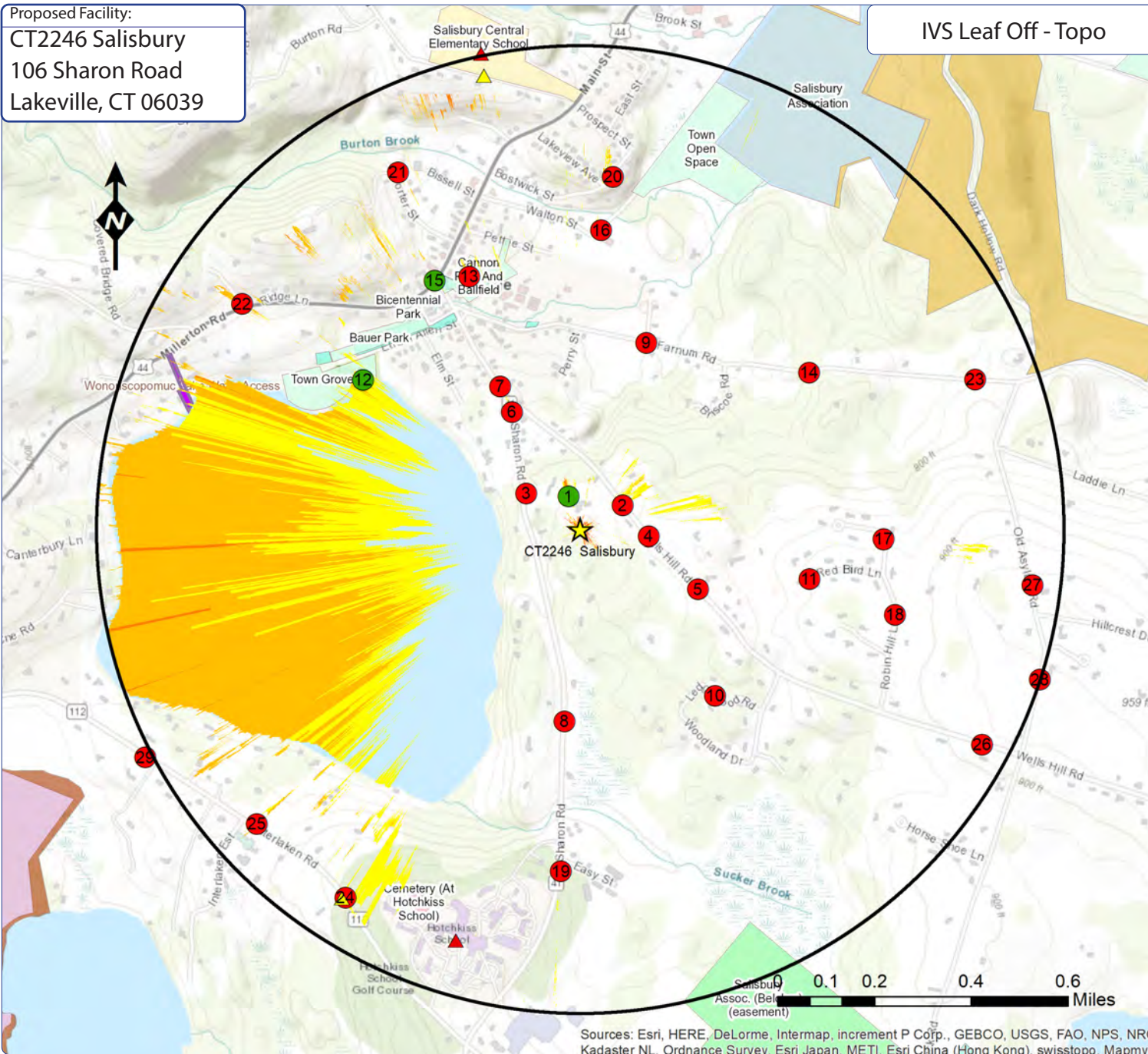
Tower Visibility			
Color	Location	% Vis	Acres
Yellow	Top 25%	4.62%	92.9
Orange	Top 50%	8.92%	179.4
Red-Orange	Top 75%	0.14%	2.8
Red	Top 100%	0.01%	0.1
Red	Base	0.01%	0.2
TOTAL		13.70%	275.4 Acres

Statistics:

PROJ_DESC=Geographic (Lat/Long) / WGS84 / arc degrees
 PROJ_DATUM=WGS84 PROJ_UNITS=arc degrees
 PIXEL WIDTH=0.0000013 arc degrees (+/- .6 ft)
 PIXEL HEIGHT=0.0000014 arc degrees (+/- .6 ft)
 RADIUS (FT)= 1 Mile
 TRANSMITTER_HEIGHT (Ft-AGL)= 94
 RECEIVER_HEIGHT (Ft-AGL)= 5 Ft
 PERCENT_VISIBLE (%) Year Round (Leaf On)= 12.34%
 PERCENT_VISIBLE (%) Seasonal (Leaf Off)= 13.70%

Notes:

- map compiled by VSS, LLC on : 11/18/2020
- Tower location(lat/long NAD 83): 41.957203 -73.434994
- Data Sources noted on documentation page attached



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRC, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, Mapbox

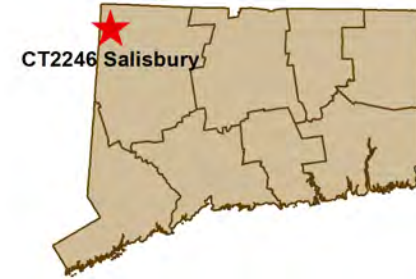
VSS-IVS- Interactive Viewshed Analysis output maps contained herein depict where proposed facility may potentially be visible based on the best and newest data publicly available at the time the data was collected. VSS does not claim to depict all locations from where the facility may potentially be visible and calculated output should be confirmed via site testing as needed.



Attachment B - Photographic Simulation Package

Proposed Wireless Telecommunications Facility:

CT2246 Salisbury
106 Sharon Road
Lakeville, CT 06039



- Balloon Test Conducted 9/25/2019 at 104 ft
- Proposed new 94 ft AGL antenna structure

Package prepared by:

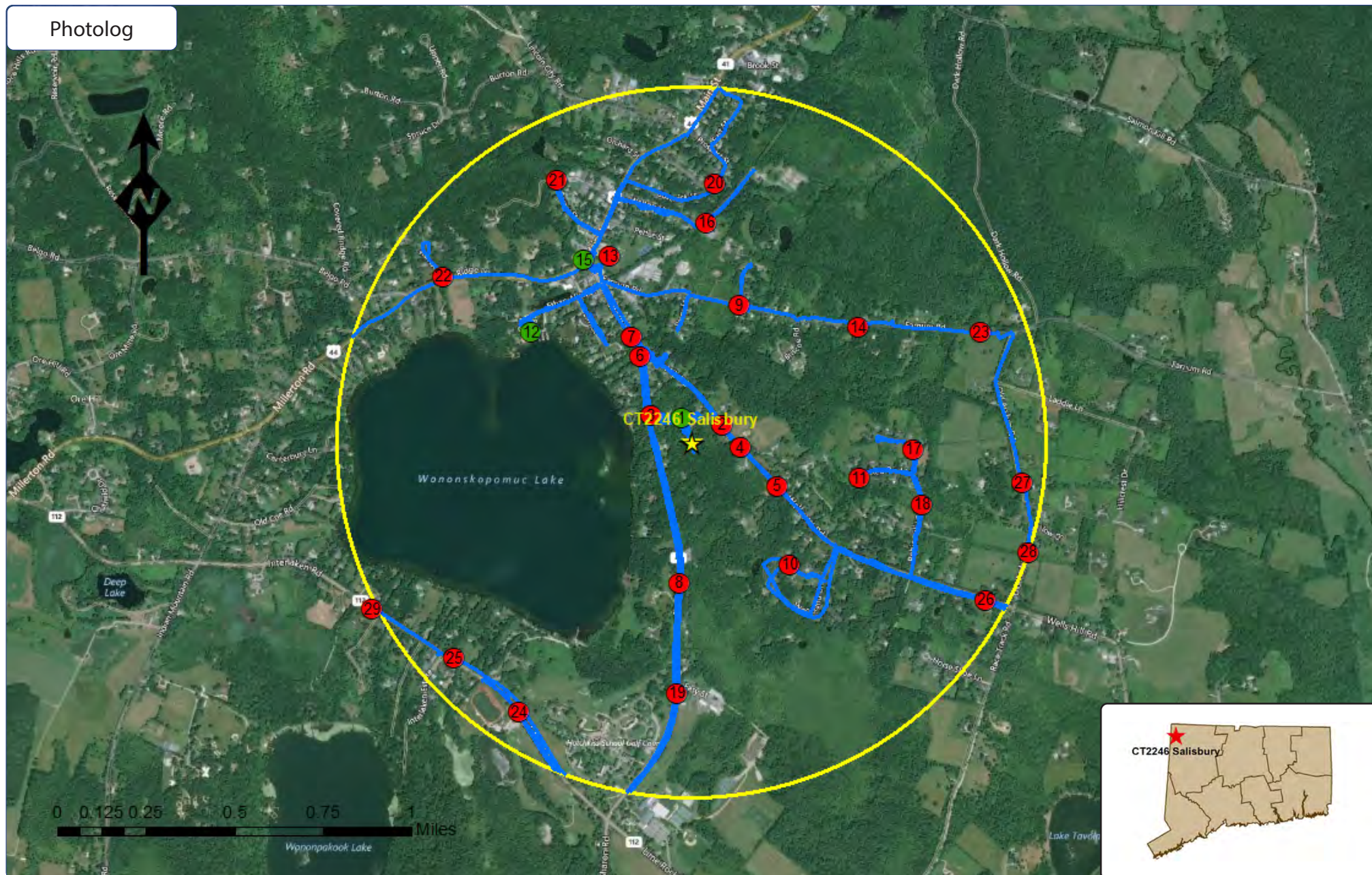
Virtual Site Simulations, LLC
24 Salt Pond Road
Suite C3
South Kingstown, Rhode Island 02879

www.VirtualSiteSimulations.com
www.ThinkVSSFirst.com

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Photolog



Wireless Telecommunications Facility:

CT2246 Salisbury
106 Sharon Road
Lakeville, CT 06039

Legend:

- ★ Facility Location
- 1 Mile Radius
- Reconnaissance Track Log
- ⊗ Photo location - Balloon visible
- Year Round Visibility
- ⊙ Photo location - Balloon visible
- Obscured Visibility
- ⊗ Photo location - Balloon NOT visible

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
1	Sharon Rd	41.95819	-73.43549	384.67 Feet	North	160	Year Round

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution





Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
1	Sharon Rd	41.95819	-73.43549	384.67 Feet	North	160	Year Round

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Tower not visible at this height



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
2	Wells Hill Rd	41.95794	-73.43332	0.1 Miles	North-East	239	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
3	Sharon Rd	41.95828	-73.43719	0.14 Miles	North-West	123	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
4	Wells Hill Rd	41.95703	-73.43226	0.14 Miles	East	275	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
5	Wells Hill Rd	41.95546	-73.43027	0.27 Miles	South-East	296	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
6	Sharon Rd	41.9607	-73.43779	0.28 Miles	North-West	149	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Tower not visible at this height



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
7	Sharon Rd	41.96148	-73.43827	0.34 Miles	North-West	150	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
8	Sharon Rd	41.95147	-73.43559	0.4 Miles	South	4	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
9	Farnam Rd	41.96282	-73.43242	0.41 Miles	North	199	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
10	Ledgewood Rd	41.95227	-73.42955	0.44 Miles	South-East	321	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
11	Red Bird Ln	41.95579	-73.4258	0.48 Miles	East	282	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
12	Town Grove	41.96164	-73.44377	0.55 Miles	North-West	124	Year Round

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution





Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
12	Town Grove	41.96164	-73.44377	0.55 Miles	North-West	124	Year Round

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
13	Main St	41.96476	-73.43955	0.57 Miles	North-West	156	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location

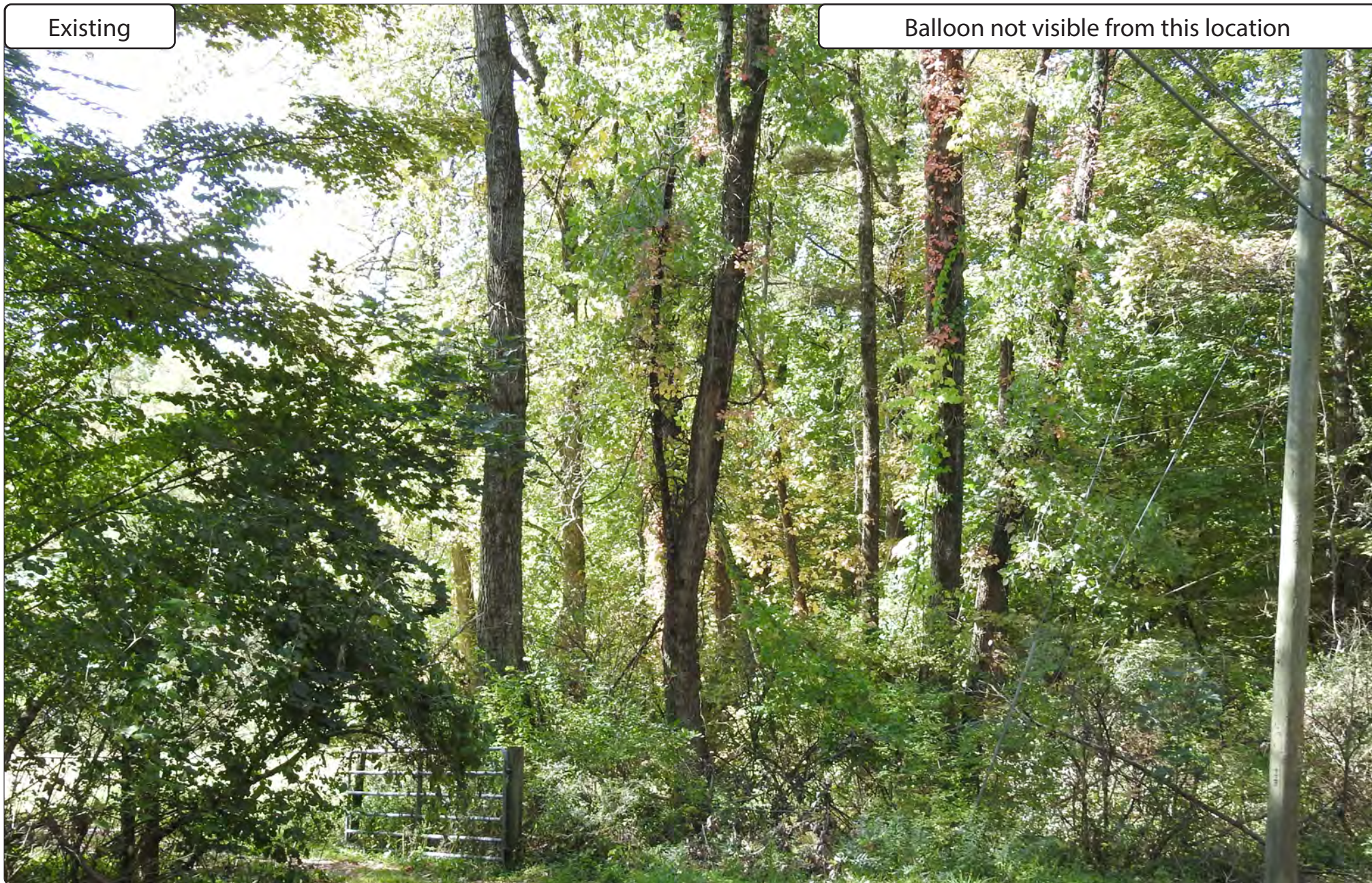


Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
14	Farnum Rd	41.96196	-73.42586	0.57 Miles	North-East	235	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
15	Millerton Rd	41.96463	-73.44093	0.6 Miles	North-West	149	Year Round

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution





Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
15	Millerton Rd	41.96463	-73.44093	0.6 Miles	North-West	149	Year Round

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
16	Walton St	41.96617	-73.43426	0.62 Miles	North	183	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
17	Robin Hill Ln	41.95699	-73.42284	0.62 Miles	East	271	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
18	Robin Hill Ln	41.95474	-73.42234	0.67 Miles	East	285	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
19	Easy St	41.94697	-73.43568	0.71 Miles	South	3	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
20	Bostwick St	41.96778	-73.43382	0.73 Miles	North	185	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
21	Porter St	41.96786	-73.44244	0.83 Miles	North-West	153	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
22	Millerton Rd	41.96388	-73.44865	0.84 Miles	North-West	123	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
23	Farnum Rd	41.9618	-73.4192	0.87 Miles	East	249	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
24	Interlaken Rd	41.94614	-73.44431	0.9 Miles	South-West	32	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
25	Interlaken Rd	41.94832	-73.44789	0.9 Miles	South-West	47	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
26	Old Asylum Rd	41.95566	-73.41683	0.94 Miles	East	277	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
27	Wells Hill Rd	41.95087	-73.41882	0.94 Miles	South-East	298	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
28	Old Asylum Rd	41.95283	-73.41651	1.0 Miles	East	288	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



Existing

Balloon not visible from this location



Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
29	Interlaken Rd	41.95029	-73.45239	1.01 Miles	South-West	62	Not Visible

Site: CT2246 Salisbury

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



ATTACHMENT 9



November 25, 2020

Ms. Laura Mancuso
Director, Cultural Resources
CBRE
4 West Red Oak Lane
White Plains, NY 10604

Subject: Proposed Telecommunications Facility
106 Sharon Road
Salisbury, CT
AT&T Mobility, LLC
ENV-20-0720

Dear Ms. Mancuso:

The State Historic Preservation Office is in receipt of the revised submitted proposal for the above-referenced project, submitted for review and comment pursuant to the National Historic Preservation Act and in accordance with Federal Communications Commission regulations.

The property located at 106 Sharon Road, known as the Wake Robin Inn, is potentially eligible for listing on the National Register of Historic Places. Additionally, the Area of Potential Effect-Visual Effects (APE-VE) contains Lakeville Manor (NR# 13000159), and the Lakeville Historic District (NR# 96000845). St Mary's Catholic Church, located at 76 Sharon Road, is also potentially eligible for listing on the National Register of Historic Places, and located within the APE-VE.

The initial proposed scope of work included the installation of a 104 foot monopole, to be located within a fenced compound within a 100 foot by 100 foot lease area. Access to the compound is to be from an existing paved driveway at the Subject Property, extended by a 12-foot wide gravel access road. Utilities are to be routed through an underground conduit following the gravel drive and existing driveway. Antennas are proposed to be mounted to the top of the monopole, at a maximum height of 104 feet above ground level (AGL).

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | ct.gov/historic-preservation

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Since the initial submittal, the project proponent has revised the design of the monopole, with antennas proposed to be mounted offset approximately 6 feet from the pole, rather than 12 feet. The monopole itself is proposed to be reduced in height from 104 feet AGL to 94 feet AGL.

Based on the information provided to our office, SHPO concurs with the findings of CBRE that the revised undertaking will have no adverse effects to sites listed on or eligible for listing on the National Register of Historic Places, with the following conditions:

1. The antennae, monopole, mounts, and associated equipment will be designed, painted to match adjacent materials, and installed to be as non-visible as possible, and
2. if not in use for six consecutive months, the antennae, mounts, and equipment shall be removed by the telecommunications facility owner. This removal shall occur within 90 days of the end of such six-month period.

The State Historic Preservation Office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act and Section 106 of the National Historic Preservation Act. For further information please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or marena.wisniewski@ct.gov.

Sincerely,

A handwritten signature in black ink that reads "Jonathan Kinney".

Jonathan Kinney
Deputy State Historic Preservation Officer

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | ct.gov/historic-preservation

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May 20, 2020

Christopher Bond
CBRE Inc. Telecom Advisory Services
70 West Red Oak Lane
White Plains NY 10604
Christopher.bond@cbre.com

Project: CT2246-Salisbury (TS00323336), Installation of a monopole and fence compound at 106 Sharon Road in Lakeville, CT
NDDDB Determination No.: 202005853

Dear Mr. Bond,

I have reviewed Natural Diversity Database (NDDDB) maps and files regarding the area of work provided for the proposed installation of a 110' monopole and fenced compound at 106 Sharon Road in Lakeville, Connecticut. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for two years. Please re-submit a new NDDDB Request for Review if the scope of work changes or if work has not begun on this project by May 20, 2022.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey, cooperating units of DEEP, landowners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDDB should not be substitutes for on-site surveys necessary for a thorough environmental impact assessment. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the database as it becomes available.

Please contact me if you have further questions at (860) 424-3378, or karen.zyko@ct.gov . Thank you for consulting the Natural Diversity Database.

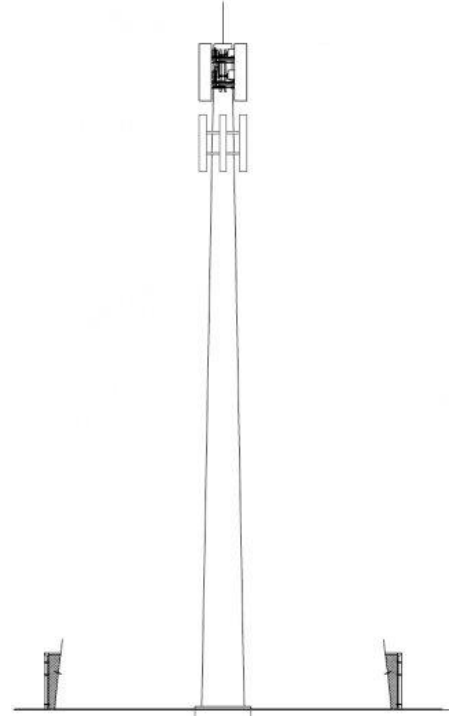
Sincerely,



Karen Zyko
Environmental Analyst

ATTACHMENT 10

Environmental Sound Assessment



Wireless Communication Facility
CT2246 Salisbury
New Monopole
106 Sharon Road, Lakeville, CT 06039

January 20, 2021

Prepared For:

New Cingular Wireless PCS, LLC
84 Deerfield Lane,
Meriden, CT 06450



Prepared By:

Modeling Specialties
30 Maple Road
Westford, MA 01886



ENVIRONMENTAL NOISE EVALUATION

AT&T is developing a Wireless Communications Facility in the Lakeville Village of Salisbury Connecticut to support personal wireless communication in the area. The proposed AT&T Wireless antennas will be mounted on a new monopole structure at 106 Sharon Road. The facility is designed to support a future co-locating carrier. AT&T's electronic equipment will be enclosed in Walk-In Cabinet (WIC) at the foot of the structure. The electronics are environmentally sensitive and will typically be cooled by ambient air. A small door-mounted cooler unit will be available on the WIC for periods of high ambient temperature when additional cooling is needed. The cooler is usually silent but will produce sound when it is actively protecting the equipment. AT&T will also have an emergency generator within a fenced equipment compound at the foot of the tower. The generator will operate only during emergencies and for occasional daytime testing of about one-half hour.

This report addresses land uses in the area, measured ambient sound levels, sources expected at this installation and resulting sound levels at area sensitive locations.

Overview of Project and Site Vicinity

The project is located on the rear lot of the existing Wake Robin Inn. Ambient sound levels were established by field measurements. The sound levels resulting from the proposed equipment were estimated using vendor data and measurements made at similar installations. AT&T plans issued by ProTerra Design Group dated November 3, 2020 provided the necessary information to support the evaluation of project sounds. The corresponding sound levels expected at the nearby sensitive locations were estimated using noise modeling techniques prescribed in acoustical literature.

Figure 1 has a backdrop of Google aerial imagery and is annotated to show the proposed site, surrounding area and nearby receptor locations, showing the orientation and distance from the proposed equipment to the receptor locations.

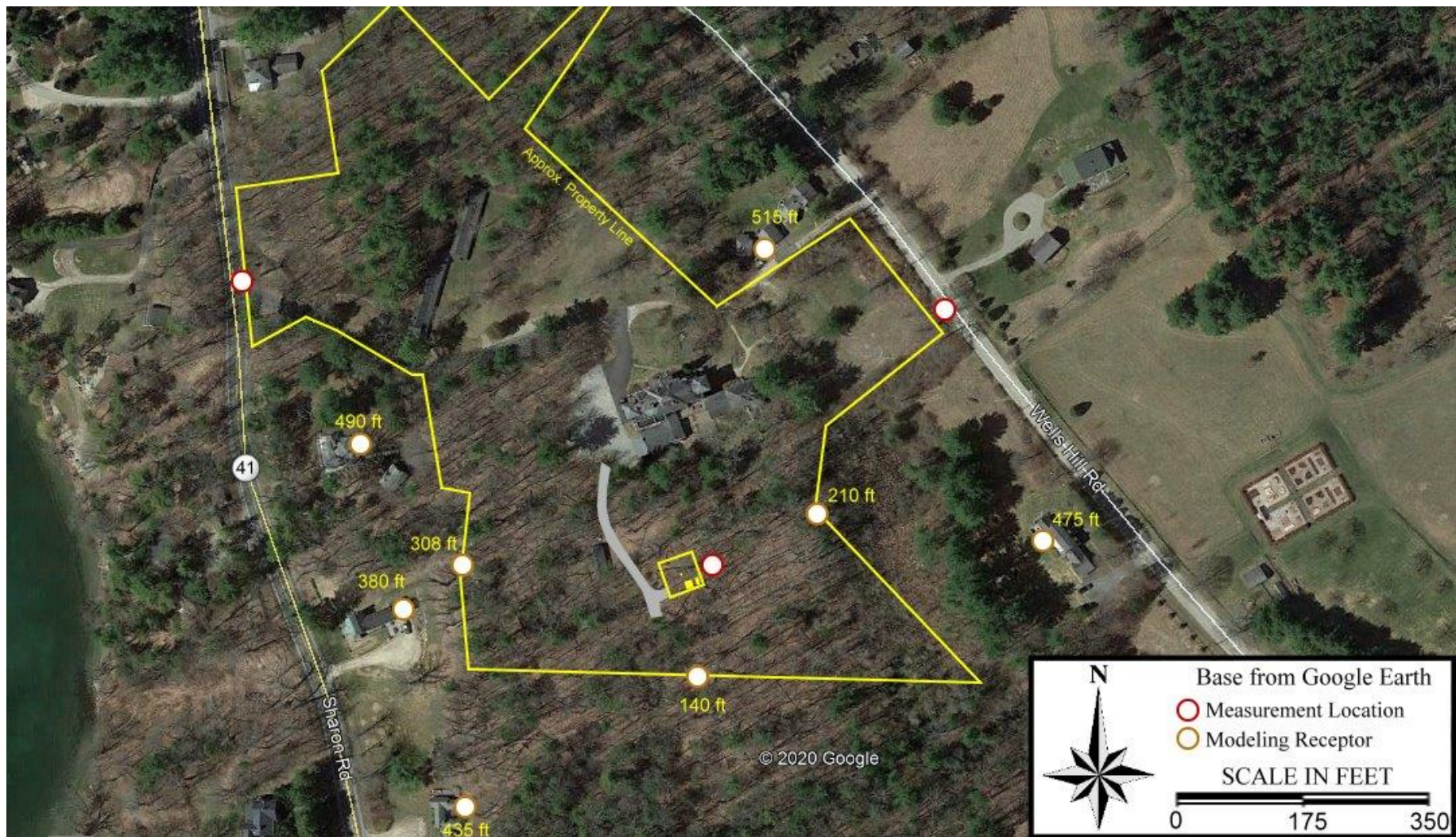


Figure 1: Project Area Showing the Site, Nearby Features and Modeled Sensitive Receptors

Discussion of General Noise Analysis Methods

There are a number of ways in which sound (noise) levels are measured and quantified. All of them use the logarithmic decibel (dB) scale. Following is a brief introduction to the noise measurement terminology used in this assessment.

Noise Metrics

The Sound Level Meter used to measure environmental sound is a standardized instrument.¹ It contains “weighting networks” to adjust the frequency response of the instrument to approximate that of the human ear under various circumstances. One of these is the *A-weighting* network. A-weighted sound levels emphasize the middle frequency sounds and de-emphasize lower and higher frequency sounds; they are reported in decibels designated as “dBA.” All broadband levels represented in this study are weighted using the A-weighting scale.

The sounds in our environment usually vary with time, so they cannot always be described with a single number. Two methods are used for describing variable sounds. These are *exceedance levels* and *equivalent level*. Both are derived from a large number of moment-to-moment A-weighted sound level measurements. Exceedance levels are designated L_n , where “n” can have any value from 0 to 100 percent. For example:

- ◆ L_{10} is the sound level in dBA exceeded only 10 percent of the time. It is close to the maximum level observed during the measurement period. The L_{10} is sometimes called the *intrusive* sound level because it is caused by occasional louder noises like those from passing motor vehicles.
- ◆ L_{50} is the median sound level: the sound level in dBA exceeded 50 percent of the time during the measurement period.
- ◆ L_{90} is the sound level in dBA exceeded 90 percent of the time during the measurement period. The L_{90} is close to the lowest sound level observed. It is essentially the same as the *residual* sound level, which is the sound level observed when there are no loud, transient noises.

By using exceedance levels, it is possible to separate steady sounds (L_{90}) from occasional louder sounds (L_{10}) in the environment. The *equivalent level* is the level of a hypothetical steady sound that has the same energy as the actual fluctuating sound observed. The equivalent level is designated L_{eq} , and is also A-weighted. The equivalent level is strongly influenced by occasional loud, intrusive noises. When a steady sound is observed, all of the L_n and L_{eq} are equal.

¹ American National Standard Specification for Sound Level Meters, ANSI S1.4-1983, published by the Standards Secretariat of the Acoustical Society of America, NY.

In the design of noise control treatments, it is essential to know something about the frequency spectrum of the sound of interest. Noise control treatments do not function like the human ear, so simple A-weighted levels are not useful for noise-control design or the identification of tones. The spectra of sounds are usually stated in terms of *octave band sound pressure levels*, in dB, with the octave frequency bands being those established by standard.² The sounds at the proposed site have been evaluated with respect to the octave band sound pressure levels, as well as the A-weighted equivalent sound level. Only the A-weighted values are presented here, since they represent the more easily recognized sound scale.

Noise Regulations and Criteria

Sound compliance is judged on two bases: the extent to which governmental regulations or guidelines are met, and the extent to which it is estimated that the community is protected from the excessive sound levels. The governmental regulations that may be applicable to sound produced by activities at the project site are summarized below.

Federal

- Occupational Noise Exposure Standards: 29 CFR 1910.95. This regulation restricts the noise exposure of employees at the workplace as referred to in OSHA requirements. Workers will not routinely attend this facility so this is not applicable to the project. Furthermore, this study demonstrates the facility will only emit infrequent sounds of modest levels that would comply with these requirements.

State

- The state of Connecticut (Connecticut Department of Energy & Environmental Protection or CTDEEP) regulates noise at Regulation Title 22a, Sections 69-1 through 69-7.4, Control of Noise. The project is a Class B (Utility - Communications) emitter. The land use is Rural Residence 1. The parcels adjacent to the site are also residential land whose property lines were evaluated as Class A Noise Receptors. The details of the CTDEEP performance criteria are shown in Table 1 below and are based on the source and receiving land uses. An excerpt from the Town of Salisbury Zoning Map is shown in Figure 2.

Table 1: Overview of CTDEEP Performance Criteria

Emitter's Zone	Receptor's Zone			
	Industrial	Commercial	Residential/Day	Residential/Night
Residential	62 dBA	55 dBA	55 dBA	45 dBA
Commercial	62 dBA	62 dBA	55 dBA	45 dBA
Industrial	70 dBA	66 dBA	61 dBA	51 dBA

² American National Standard Specification for Octave, Half-octave and Third-octave Band Filter Sets, ANSI S1.11-1966(R1975).

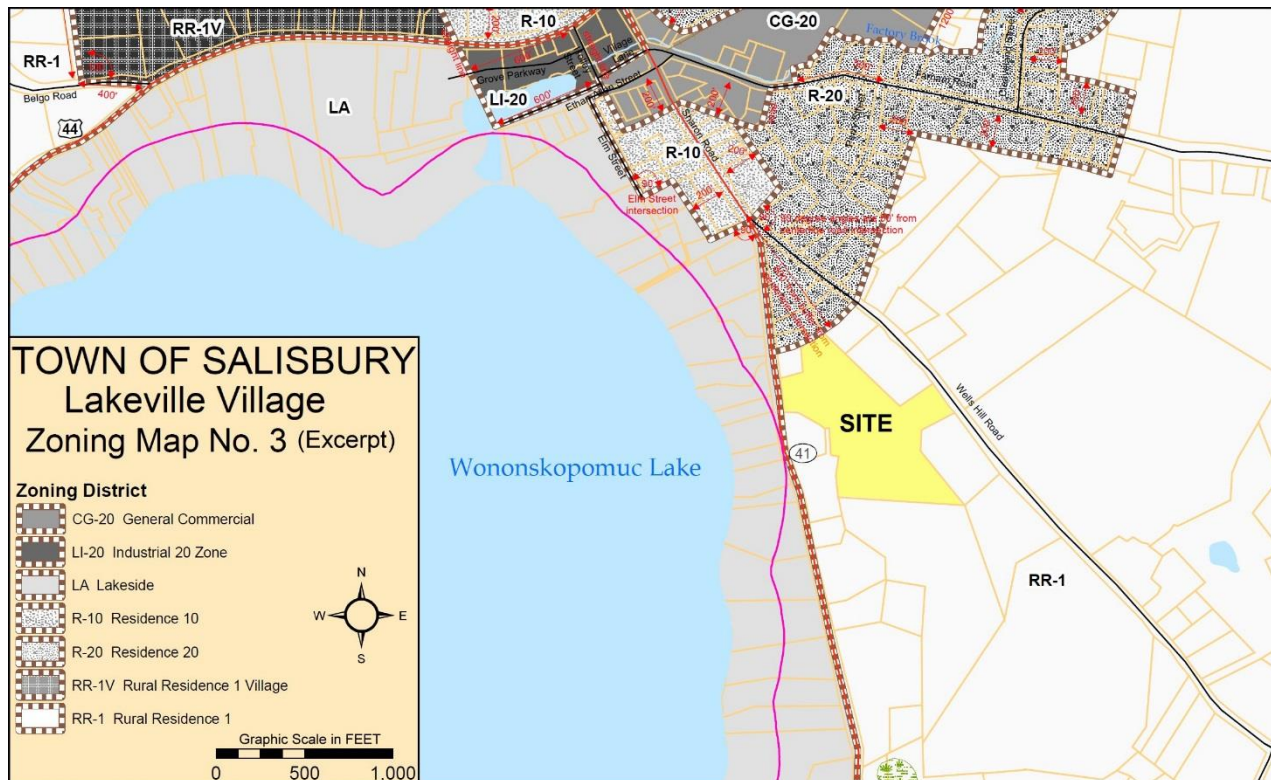


Figure 2: Excerpt from the Salisbury Online Zoning Map

- **Local**

The Salisbury Zoning Regulations acknowledge the authority of the state (under the Connecticut Siting Council) to regulate the location of towers in the state. However, their regulations were retained as a statement of the Planning and Zoning Commission's policy and practice regarding tower siting. Communication Towers are addressed in **Article X section 1000.8 Environmental Impact**. **Paragraph c** requires a list that includes *the characteristics of any emergency or back-up power source to be situated at the site, including noise level specification if electro-mechanical*. All specified sound emitting equipment and corresponding sound levels are provided in this report.

It is noted that no quantitative performance standard was identified in the general or Wireless sections of the Salisbury Regulations. The facility sounds are evaluated in this study using the CTDEEP criteria.

Existing Community Sound Levels

The area has a rural residential character. The nearest sensitive receptors (residences) are located on adjacent lots in various distances and directions from the proposed back lot equipment. Sound level measurements were made at two locations to establish the background sound levels for the area on January 11, 2021. The ambient sound typically fluctuates through the day and night. While this facility has no significant sources of

nighttime sound, both a daytime and nighttime survey were conducted at the site. A new source of sound tends to be noticed most during conditions that are otherwise quiet. Because of this, the ambient sound surveys were scheduled under conditions associated with quiet sound levels for the area. This includes no precipitation, dry roads, low wind and off-peak traffic times.

The conditions at the time of the survey were exaggerated due to the COVID-19 emergency. More residents are working from home, which reduces traffic volume on area roadways. The only sounds were from a few vehicles on local roadways and distant traffic on Rte. 44 to the west. A road patching crew worked their way along Rte. 41, but the meter was paused to avoid its influence on the measurement. Some sound was noted from residential building maintenance but it was a minor contribution. The Inn seemed to be off-season. No other significant existing sound sources were noted at or near the proposed site.

Attended sound level measurements were made using a Rion NA-28 sound level meter. The measurements create a baseline community sound level and captured the frequency-specific character of the sound. The meter was mounted on a tripod approximately 5 feet above the ground. The microphone was fitted with factory recommended foam windscreen. The meter was programmed to take measurements for 20 minutes and then store processed statistical levels. The meter meets the requirements of ANSI S1.4 Type 1 – Precision specification for sound level meters. The meter was calibrated in the field using a Larsen Davis Cal-250 acoustical calibrator before and after the sessions. The field calibrations indicated that the meters did not drift during the study. The spectrum analyzer complies with the requirements of the ANSI S1-11 for octave band filters.

Results of the Ambient Survey

The results of the ambient sound level measurements are summarized in Table 2. The Leq represents the “time average” sound level of the fluctuating ambient sound, which is strongly affected by occasional intrusions like vehicle pass-byes while the L₉₀ represents the background or “near quietest” level in the measured sample. Both are shown in this study to characterize the existing sound field. Comparing the Leq levels (including all sounds) to the L₉₀ levels (quietest 10% of samples) illustrates the way fluctuating levels affect the measured ambient. Ambient levels are affected by community conditions, meteorology, seasons, insects and traffic patterns. The measurements indicate that the existing daytime background sound levels (L₉₀) are currently well within the residential target levels of the CTDEEP standards for daytime sound standards (55 dBA).

Table 2: Ambient Sound Levels Measured on January 11, 2021

Location	Time	Period	L _{eq}	L ₉₀
Rte 41 @ Inn Driveway	9:56 AM	Day	66 dBA	37 dBA
Wells Hill Road	10:31 AM	Day	63 dBA	36 dBA

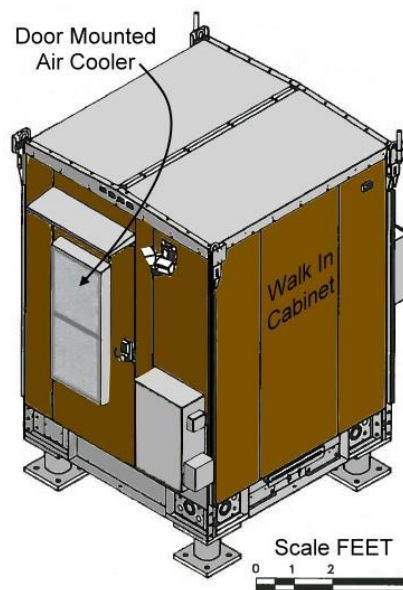
Rte 41 @ Inn Driveway	4:06 AM	Night	54 dBA	25 dBA
Wells Hill Road	4:42 AM	Night	45 dBA	22 dBA

In most residential communities, the daytime is affected by more traffic volume on local and distant roadways along with local daytime activities. Nighttime levels tend to be lower because of lower traffic volumes and the lack of neighborhood activities. This is consistent with the measured levels in the project area.

Sounds from the Proposed Installation

The proposed installation has been designed to minimize the effect on the sound environment. Most of the equipment will produce no sound such as tower, antennas, cable trays, utilities and other infrastructure. Sounds that will be produced by the equipment will be significantly mitigated to manage any effects at sensitive locations. This analysis represents the most likely sound levels to be expected as a result of the normal operation of the equipment using data from potential equipment vendors and measurements of other similar equipment. Details of the modeling and assumptions are provided below. As noted, there are only two proposed sources of sound related to this project. The cabinet coolers and standby generators to provide system power during periods when utility support is lost. The equipment is described and quantified below.

Environmental Control Equipment. A walk-in cabinet (WIC) will be located in the fenced compound at the base of the utility structure. The cabinet will house AT&T equipment that is environmentally sensitive. The proposed Vertiv cabinet has two ways to provide cooling. Multiple fans move filtered ambient air through the front wall and out the back wall. Their speed and corresponding sound level vary based on how much cooling is needed. The ventilation system provides adequate cooling except when the ambient temperature is very high. When needed, the door-mounted cooler provides additional support. The highest operational sound levels are expected on the hottest days of summer when the cooler is active. It is noted that the system has a heating mode with minimal interaction with the outdoors, so is not associated with community sound.



Non-Routine Sound Emissions

The installation will include a diesel generator installed inside an acoustical enclosure. It will be installed on a pedestal that houses its fuel supply. Its operation will be tested no more than one-half hour once per week and only during the daytime hours. The sound level associated with the generator test is rated at 66 dBA at 23 feet from the equipment. This is a maintenance function and assures that the equipment is available when needed for emergency use.

The other occasion when the generator would operate is during the loss of utility power. These rare events are most likely to occur during exceptional conditions like major storms. The emergency use is considered an upset condition that is not addressed in this report.



Equipment Sound Level Modeling

A computer model was developed for the project sounds based on conservative sound propagation principles prescribed in acoustics literature. Each of the expected sources during operation of the facility were identified and quantified, then estimated at the nearest sensitive receptors. Sound levels decrease with distance, so the resulting sound level will be lower at more distant locations. The sound modeling accounts for specific source and propagation path assumptions for each modeled receiver location.

Sound level prediction modeling was performed using CADNA software under downwind weather conditions as assumed in the standard ISO 9613-2. Table 3 summarizes the modeling input parameters.

Table 3: Modeling Input Parameters

Item	Modeling Input and Description
Terrain	Flat Terrain assumed
Temperature	10°C
Relative Humidity	70%
Weather Condition	6.5 mph, directly from facility to receptor*
Ground Attenuation	0.2, hard surface (0.5 = soft ground, 0.0 = pure reflection)
Atmospheric Inversion	CONCAWE – Category F**
# of Sound Reflections	2
Receptor Height	1.5 meter above ground level

** Propagation calculations incorporate the adverse effects of certain atmospheric and meteorological conditions on sound propagation, such as gentle breeze of 1 to 5 m/s (ISO 1996-2: 1987) from source to receiver.*

***CONCAWE – Category F indicates an atmosphere that promotes sound propagation.*

Connecticut standards apply at the property line, the nearest of which is about 140 feet from the generator. Some modeled residences are line-of-sight to the equipment, so no terrain effects were included in any modeling. The proposed equipment layout plan is shown in Figure 3. An elevation drawing of the compound is shown in Figure 4.

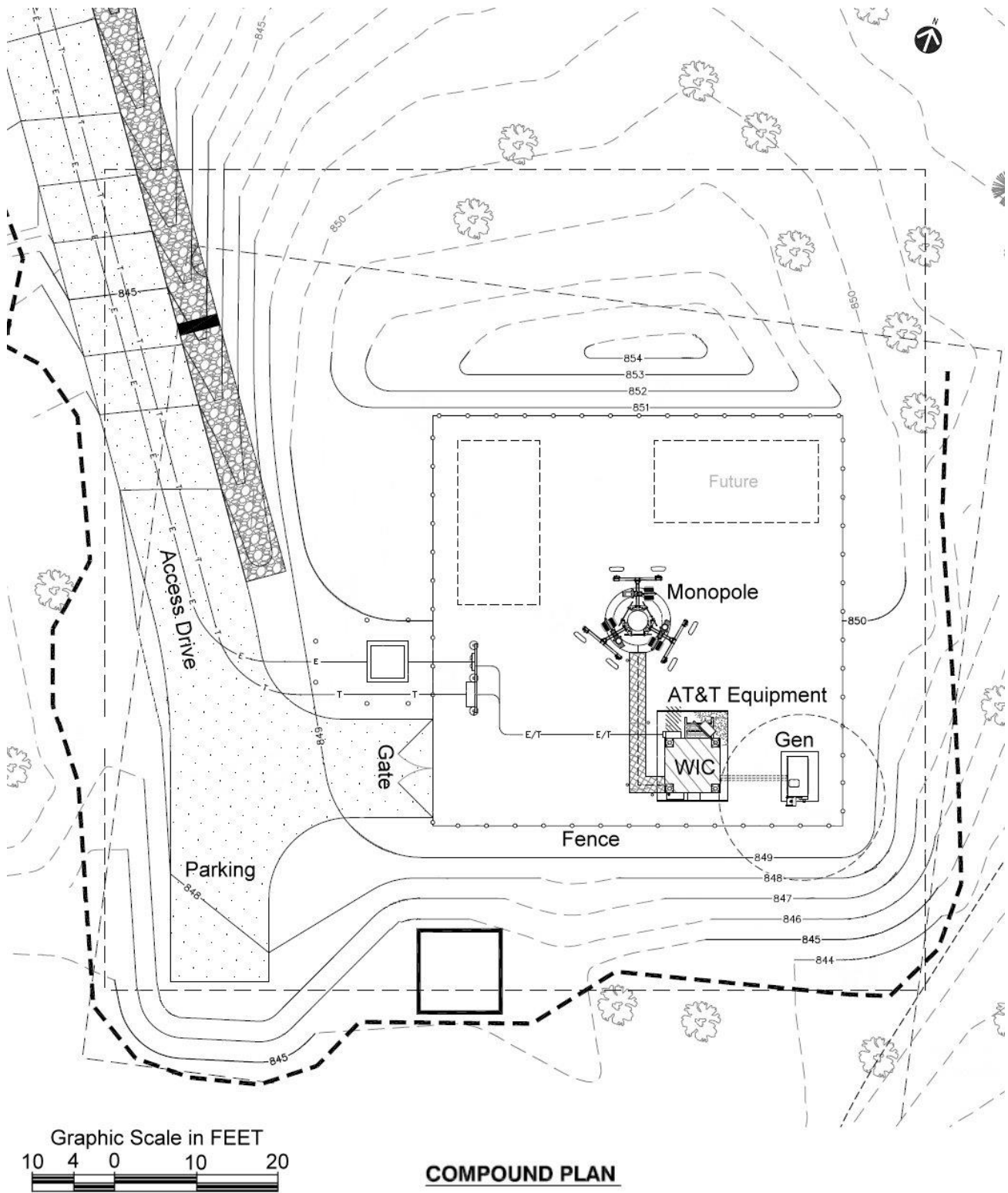


Figure 3: Plan Showing the Proposed Layout of the Equipment Compound

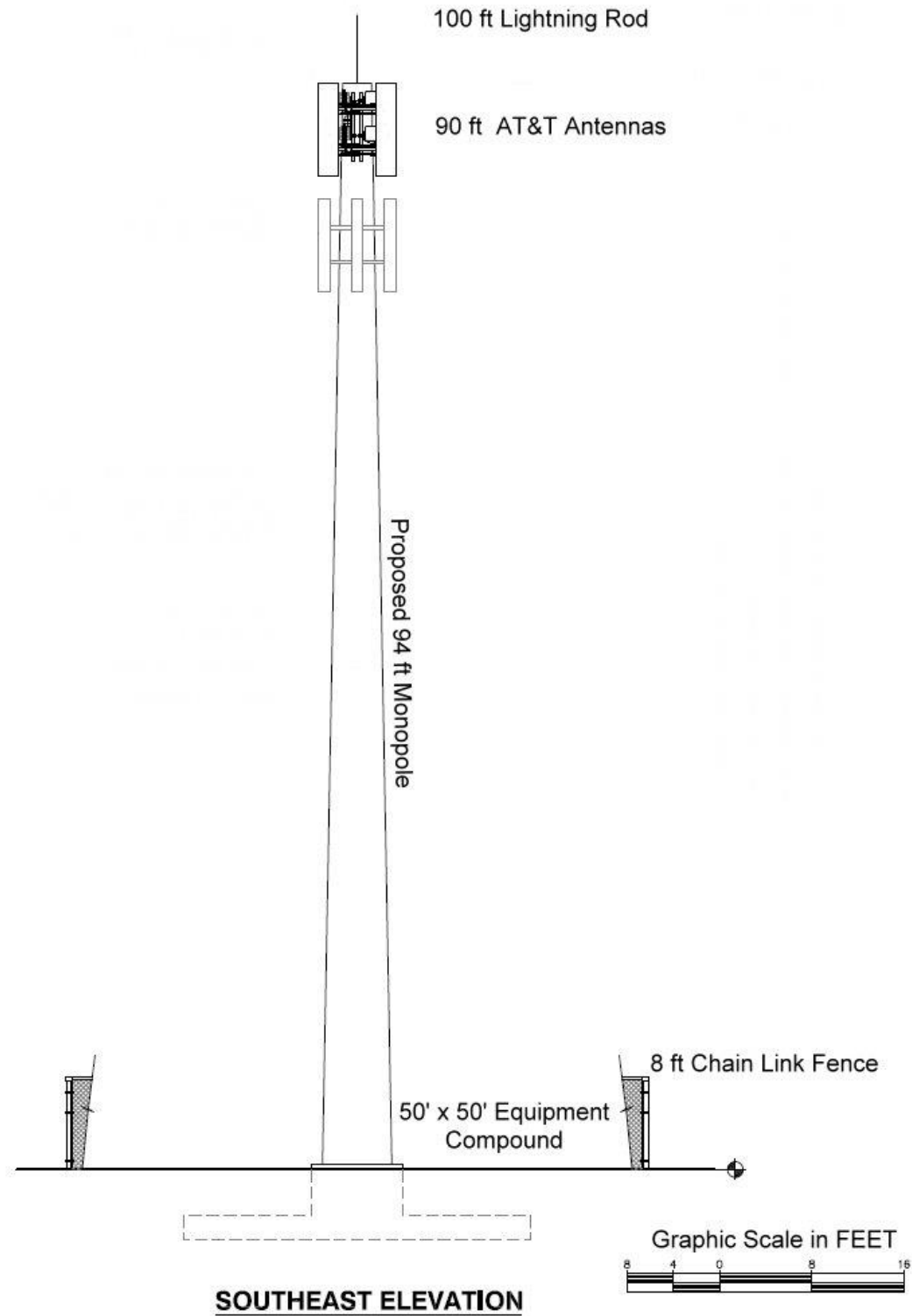


Figure 4: Plan Showing the Proposed Elevation Character of the Project

Results of Sound Level Modeling

The routine operation of the facility is not expected to include the cabinet cooler or generator, so emits only fan sounds when modest cooling is needed. The cabinet will be cooled by drawing ambient air through the cabinet using fans that are located inside the unit. This is not expected to be noticeable outside host site.

There are two conditions where the facility equipment might be heard off site. The first is during the hot summer conditions when the cabinet cooler is needed to supplement the cooling fans. This is only expected to occur during the daytime, but is activated automatically to protect the equipment from overheating. In case it is ever needed at night, it is represented as un-anticipated worst-case nighttime sound scenario. The results of the modeling are shown in Table 4. The CTDEEP standards are applied at the property lines. Additional modeling was conducted to estimate the sound at the neighboring residences.

Table 4: Predicted Cabinet Cooler Sound Levels Expected at Receptors

Receptor Location	Distance (ft) (from Source)	Ambient Level Day (dBA L_{eq})	Sound Level Standard (dBA)	Cabinet Cooler Level
P/L, West	308	25	45	25 dBA
P/L, South	140	25	45	33 dBA
P/L, East	210	22	45	29 dBA
Residence, Northwest	490	25	45	21 dBA
Residence, West	380	25	45	23 dBA
Residence, Southwest	435	25	45	22 dBA
Residence, East	475	22	45	21 dBA
Residence, Northeast	515	22	45	21 dBA

Note: It is customary to conduct all calculations using precise values, but to round the result to whole dBA. All results are rounded to units (dBA).

The second rare event when the sound might be heard off-site is the one-half hour per week testing of the generator. The generator is commonly tested in the late morning. The hottest of the day when the cooler might be active is typically in the afternoon. Therefore, these two sources are not expected to operate together. Nevertheless, the daytime worst-case sound scenario is modeled to be with both sources active together. The results are summarized in Table 5 and shown graphically in Figure 5.

Table 5: Predicted Worst-Case Sound Levels Expected at Receptors

Receptor Location	Distance (ft) (from Source)	Ambient Level Day (dBA L_{eq})	Sound Level Standard (dBA)	Cooler+ Generator Worst Case Level
P/L, West	308	37	55	42 dBA
P/L, South	140	37	55	51 dBA
P/L, East	210	36	55	47 dBA
Residence, Northwest	490	37	55	38 dBA
Residence, West	380	37	55	40 dBA
Residence, Southwest	435	37	55	39 dBA
Residence, East	475	36	55	39 dBA
Residence, Northeast	515	36	55	39 dBA

Sound Mitigation Assumptions

There are several notable mitigation measures in place to achieve the low sound levels shown above. The selection of the walk-in cabinet reduces the size and sound levels associated with full size shelters. The cabinet can be oriented to emit sound in a direction that minimizes sound at the most exposed property line. The cabinet cooling system uses fans to move fresh air through the cabinet for cooling under most conditions. A supplementary door mounted cooler is activated only for the period when the heat load exceeds the fan cooling capacity. The generator was selected from “quietest design” units that are available to support AT&T project electronics. The lower sound levels are a result of the genset full enclosure and quiet-test feature. As a comparison, most portable gasoline fired generators sized to support a residence would operate at more than 70 dBA at 23 feet. The routine test of the project generator that is 4 or 5 times typical residential capacity is expected to emit in the 60’s dBA at the same reference distance. The selected Level 2 acoustical enclosure is Generac’s quietest design.

Conclusions

The potential sounds from the proposed installation were evaluated using measured field levels, vendor data and numerical modeling methods. Most of the time, the proposed wireless facility will produce no sound. The ambient daytime sound level was established to be mid 30’s dBA during the daytime in the area. The only routine facility sound is from the cabinet ventilation which is expected to be below the ambient level at the nearest property lines. A supplementary cabinet cooler is expected to operate only during the daytime under summertime highest ambient temperatures. Its sound is expected to be about 33 dBA or lower at the nearest property lines during its operation.

Infrequently, the proposed facility will include the sound from testing the emergency generator. This infrequent daytime testing was modeled to include the combined sound from cooler and generator simultaneously. This represents a worst-case estimate, which could only happen during the few hottest days of the summer. The worst-case daytime sound estimate at the nearest property line is 51 dBA. The worst-case daytime sound estimate at the nearest residence is 40 dBA. Both are well below the daytime standard of 55 dBA.

No significant sources are expected to operate during nighttime conditions. Therefore, the nighttime levels will remain at or near ambient levels (mid 20’s dBA). If the cabinet cooler were ever needed at night, the expected sound level is 33 dBA at the nearest property line. The sound levels at the residences would remain in the mid 20’s dBA. The results of this expert analysis indicate the facility will comply with all federal and state requirements with respect to project sound at residential receptors.

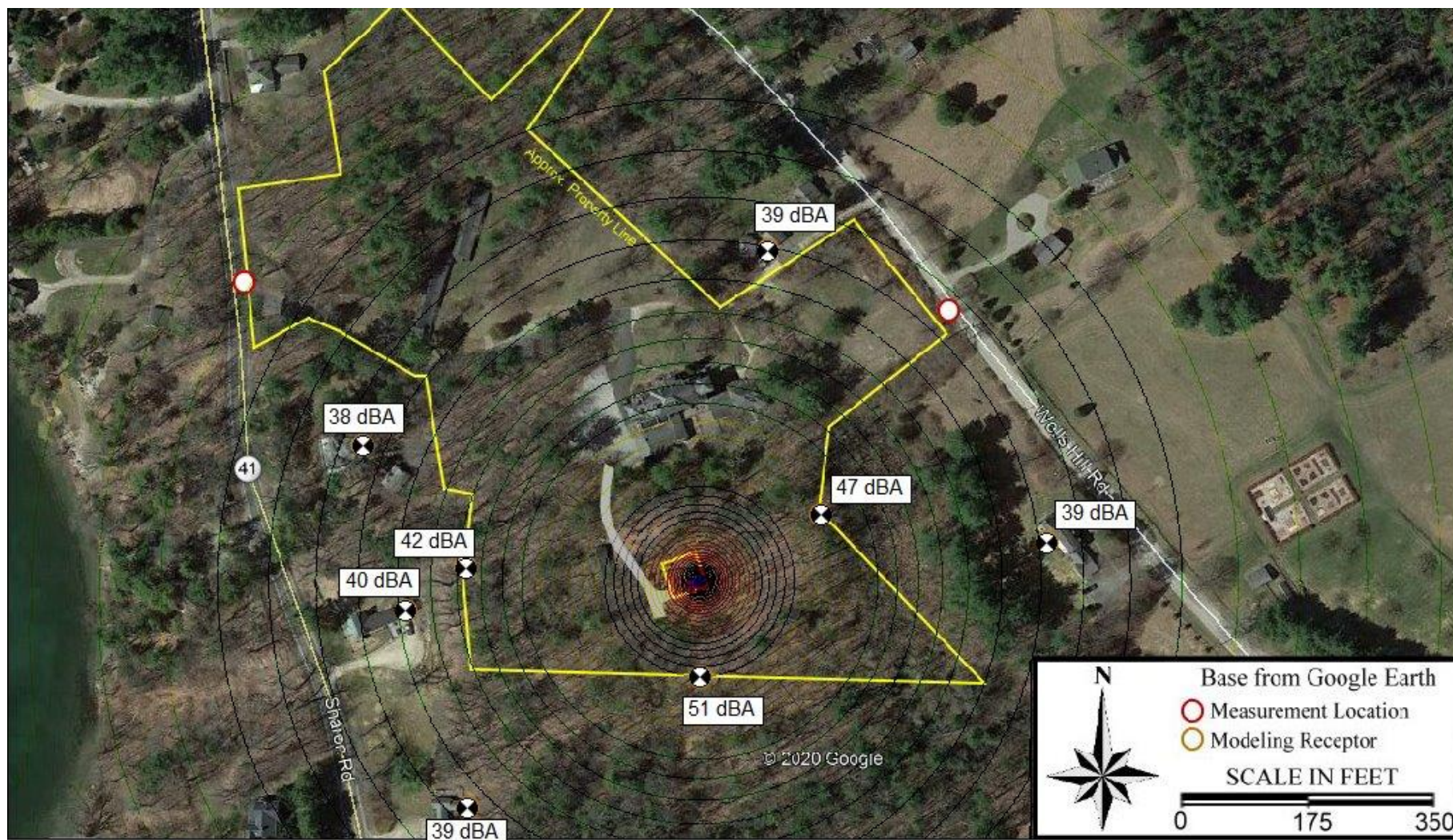


Figure 5: Graphical Summary of the Modeling Results Under Worst-Case Daytime Operating Conditions

ATTACHMENT 11

CURTIS RAND
FIRST SELECTMAN

Telephone: 860-435-5170
Fax: 860-435-5172
Email: townhall@salisburyct.us



Christian Williams
Donald Mayland
Selectmen

Town Hall
P.O. Box 548
27 Main Street
Salisbury, Connecticut 06068

March 23, 2021

Cuddy & Feder LLP
Attn: Kristen Motel, Esq.
445 Hamilton Avenue, 14th floor
White Plains, NY 10601

RE: AT&T Proposed Wireless Telecommunications Tower Facility
106 Sharon Road, Salisbury, CT

To Whom it May Concern:

This office has reviewed the subject proposal for construction of a new telecommunications tower at 106 Sharon Road. Based on a review of the materials in the Technical Report provided, this office has no comment and no environmental concerns.

The tower will address concerns about the safety of our residents and visitors to Lakeville. The lack of cell service along State Highways 41 and 112 poses a particularly high level of risk to motorists. Additionally, the unreliable cell service in the Lakeville commercial district has a significant impact on local businesses and their customers. The lack of cell service has been a longstanding issue in our community. The 2012 Salisbury Plan of Conservation & Development highlights the importance of communications infrastructure and recognizes Salisbury's unreliable cell phone coverage. We are over a year into the global pandemic and work-from-home and remote learning capabilities are critical. Many residents and visitors to our Town are lacking the most effective communication tool available due to the lack of reliable wireless service. Therefore, the Town of Salisbury is supportive of the proposed telecommunications tower as an effective strategy to improve cell phone coverage in Lakeville.

Please contact me if you have any questions.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Curtis Rand", is written over the typed name.

Curtis Rand, First Selectman
Town of Salisbury

cc: Harry Carey, AT&T; Lucia Chioocchio, Esq., Cuddy & Feder LLP

ATTACHMENT 12

NOTICE

NOTICE IS HERBY GIVEN, pursuant to Section 16-50g et seq. of the Connecticut General Statutes, as amended, and Section 16-50j-1 et seq. of the Regulations of Connecticut State Agencies, as amended, of the intent of New Cingular Wireless PCS, LLC ("AT&T") to file an Application for a Certificate of Environmental Compatibility and Public Need with the Connecticut Siting Council ("Siting Council") on or after March 31, 2021 to construct a wireless telecommunications tower facility ("Facility") at 106 Sharon Road, in the Village of Lakeville, within the Town of Salisbury.

The Facility is proposed on an 11.52-acre parcel of land owned by Wake Robin, LLC identified as Map 47, Lot 02 on the Town of Salisbury Tax Map and includes an approximately 10,000 s.f. lease area in the south-central section of the parcel.

The Facility consists of a new self-supporting monopole that is 94' in height with a lightning rod extending an additional 6' above the top of the pole, bringing the total height to approximately 100'. The monopole tower will be located within a 2,500 square-foot fenced equipment compound located within the lease area in the south-central portion of the parcel. AT&T's antennas would be installed at a centerline height of 90' on the monopine tower and the Facility will be designed to support the antennas and equipment of one additional FCC licensed wireless carrier. The location, height and other features of the Facility are subject to review and potential change by the CSC under the provisions of Connecticut General Statutes §16-50g et seq.

The Application explains the need, purpose and benefits of the Facility and also describes the environmental impacts of the proposed Facility.

A balloon, representative of the proposed height of the facility, will be flown at the proposed location on the first day of the Siting Council public hearing on the Application, or on such other day specified by the Siting Council at a time to be determined by the Siting Council, but anticipated to be between the hours of 12pm and 5pm. The Siting Council public hearing on the Application will be held in the Town of Salisbury.

Interested parties and residents of Salisbury, Connecticut are invited to review the Application during normal business hours after March 31, 2021 when the Application is anticipated to be filed, at the following offices:

Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Patricia Williams
Town Clerk
Town Hall
P.O. Box 548
27 Main Street
Salisbury, CT 06068

Or the offices of the undersigned. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned:

Lucia Chiocchio, Esq.
Kristen Motel, Esq.
Cuddy & Feder LLP
445 Hamilton Ave, 14th Floor
White Plains, NY 10601
(914) 761-1300



445 Hamilton Avenue, 14th Floor
White Plains, New York 10601
T 914 761 1300
F 914 761 5372
cuddyfeder.com

Lucia Chiocchio
lchiocchio@cuddyfeder.com

March 24, 2021

**VIA CERTIFIED MAIL/
RETURN RECEIPT REQUESTED**

Re: New Cingular Wireless PCS, LLC ("AT&T")
Wireless Telecommunications Tower Facility
106 Sharon Road, Salisbury, Connecticut

Dear:

We are writing on behalf of our client New Cingular Wireless PCS, LLC ("AT&T") with respect to the above referenced matter and our client's intent to file an application with the State of Connecticut Siting Council ("CSC") for approval of a proposed wireless communications tower (the "Facility") in the Village of Lakeville within the Town of Salisbury.

State Law requires that record owners of property abutting a parcel on which a facility is proposed be sent notice of an applicant's intent to file an application with the CSC. The Facility is proposed to be constructed at 106 Sharon Road, identified as Map 47, Lot 02 on the Town of Salisbury Tax Map. We are writing to you to provide notice as you are an abutting neighbor to 106 Sharon Road. The Facility consists of a new self-supporting monopole that is 94' in height with a lightning rod extending an additional 6' above the top of the pole, bringing the total height to approximately 100'. The monopole tower will be located within a 2,500 square-foot fenced equipment compound located within the 10,000 square-foot lease area in the south-central portion of the parcel and will be unmanned with no sanitary or water services. Additional details are provided in the notice included with this letter.

The location, height and other features of the Facility are subject to review and potential change by the CSC under the provisions of Connecticut General Statutes §16-50g et seq.

If you have any questions concerning this application, please contact the CSC or the undersigned after March 31, 2021 the date which the application is expected to be on file.

Very truly yours,

A handwritten signature in blue ink that reads 'Lucia Chiocchio'.

Lucia Chiocchio

Enclosure

cc: Kristen Motel, Esq.

NOTICE

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The Facility consists of a new self-supporting monopole that is 94' in height with a lightning rod extending an additional 6' above the top of the pole, bringing the total height to approximately 100'. The monopole tower will be located within a 2,500 square-foot fenced equipment compound located within the lease area in the south-central portion of the parcel. AT&T's antennas would be installed at a centerline height of 90' on the monopine tower and the Facility will be designed to support the antennas and equipment of one additional FCC licensed wireless carrier. The location, height and other features of the Facility are subject to review and potential change by the CSC under the provisions of Connecticut General Statutes §16-50g et seq.

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Lucia Chiocchio, Esq.
Kristen Motel, Esq.
Cuddy & Feder LLP
445 Hamilton Ave, 14th Floor
White Plains, NY 10601
(914) 761-1300

Parcel	Owner	Owner2	Address	City	State	Zip
47-02	WAKE ROBIN LLC		104 + 106 Sharon Road	Lakeville	CT	06039
47-08	Todi Canie		90 Sharon Road	Lakeville	CT	06039
47-07	Richard Donati	Janice Donati	86 Sharon Road	Lakeville	CT	06039
47-04	Michael E. Rogers		25 Wells Hill Road	Lakeville	CT	06039
47-03	Charles Kalison	Sandra Kalison	33 Wells Hill Road	Lakeville	CT	06039
47-02.1	Angelo Filotto	Kwai Filotto Trustee	53 Wells Hill Road	Lakeville	CT	06039
47-01	Sarah Patterson Virden		77 Wells Hill Road	Lakeville	CT	06039
37-14	Jack Hawley II, Trustee		Sharon Road	Lakeville	CT	06039
47-10	Paul Watson	Elaine Watson	126 Sharon Road	Lakeville	CT	06039
47-09	Matthew Asinari	Theresa Asinari	110 Sharon Road	Lakeville	CT	06039
47-15.1	Mark Hochberg	Faith Hochberg	97 Sharon Road	Lakeville	CT	06039
47-15.2	Faith S. Hochberg		Sharon Road	Lakeville	CT	06039
47-14	Mark S. Hochberg		Sharon Road	Lakeville	CT	06039
47-49	Marilyn G. Moller	John T. Moller	34 Wells Hill Road	Lakeville	CT	06039
47-51	David J. Kemp		40 Wells Hill Road	Lakeville	CT	06039
47-52	Gregory Wilmore	Barbara Hockstader	50 Wells Hill Road	Lakeville	CT	06039
47-53	John Est Hazard	Jan T. Hazard	64 Wells Hill Road	Lakeville	CT	06039
38-08	William F. Cruger	Angela Cruger	86+88 Wells Hill Road	Lakeville	CT	06039

CERTIFICATION OF SERVICE

I hereby certify that on the 24th day of March 2021, a copy of foregoing notice of the intent to file an Application with the Connecticut Siting Council, was sent by certified mail, return receipt requested to each of the parties listed below:

Dated: 3/24/2021



Cuddy & Feder LLP
45 Hamilton Avenue, 14th Floor
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Attorneys for:
New Cingular Wireless PCS, LLC (AT&T)

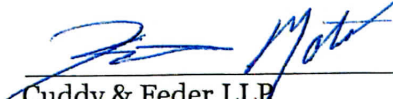
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ATTACHMENT 13

CERTIFICATION OF SERVICE

I hereby certify that on the 30th day of March 2021, a copy of the foregoing Application to the State of Connecticut Siting Council for a Certificate of Environmental Compatibility and Public Need, was sent by first class certified mail to the list below.

Dated: 3/30/21


Cuddy & Feder LLP
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White Plains, New York 10601
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New Cingular Wireless PCS, LLC ("AT&T")

State

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STATE HISTORIC PRESERVATION OFFICE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT 450 COLUMBUS BLVD., 5 TH FLOOR, HARTFORD, CT 06103	SECRETARY OF STATE DENISE MERRILL 165 CAPITOL AVENUE HARTFORD, CT 06106
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Federal

FEDERAL COMMUNICATIONS COMMISSION 45 L STREET NE WASHINGTON, DC 20554	FEDERAL AVIATION ADMINISTRATION 800 INDEPENDENCE AVENUE, SW WASHINGTON, DC 20591
U.S. CONGRESSWOMAN –5 TH DISTRICT JAHANA HAYES 108 BANK STREET, 2 ND FLOOR WATERBURY, CT 06702	U.S. SENATOR CHRIS MURPHY COLT GATEWAY 120 HUYSHOPE AVENUE SUITE 401 HARTFORD, CT 06106
U.S. SENATOR RICHARD BLUMENTHAL 90 STATE HOUSE SQUARE 10 TH FLOOR HARTFORD, CT 06103	

Town of Salisbury

CURTIS RAND FIRST SELECTMAN TOWN HALL P.O. BOX 548 27 MAIN STREET, 1 ST FLOOR SALISBURY, CT 06068	ABBY CONROY LAND USE ADMINISTRATOR PLANNING AND ZONING TOWN HALL P.O. BOX 548 27 MAIN STREET, 2 ND FLOOR SALISBURY, CT 06068
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INLAND WETLANDS & WATERCOURSES COMMISSION TOWN HALL P.O. BOX 548 27 MAIN STREET SALISBURY, CT 06068	PATRICIA WILLIAMS TOWN CLERK TOWN HALL P.O. BOX 548 27 MAIN STREET, 1 st FLOOR SALISBURY, CT 06068
CONSERVATION COMMISSION MALLORY TOWN HALL TOWN HALL P.O. BOX 548 27 MAIN STREET SALISBURY, CT 06068	

ATTACHMENT 14

Connecticut Siting Council Application Guide

<u>Application Guideline</u>	<u>Location in Application</u>
(A) An Executive Summary containing the addresses and proposed locations of the proposed facility and any alternatives, including height of tower and associated antennas, access roads and utility services; special design features; type/size/number of transmitters and receivers with signal frequency; map showing fixed facilities with which facility would interact; coverage signal strength; forecast of when maximum capability would be reached.	Section I.B; Attachment 1
(B) Statement of the need for the proposed facility with as much specific information as is practicable.	Section III.A; Attachment 1
(C) Statement of the benefits expected from the proposed facility.	Section III.B; Attachment 1
(D) Maps and drawings for the proposed facility and any alternatives.	Attachment 4
(E) A description of the proposed site and any alternative sites, including zoning classification, planned land uses and surrounding areas.	Sections V & VII; Attachments 3, 4 & 5
(F) A description of the scenic, natural, historic, and recreational characteristics of the proposed site and any alternative sites and surrounding areas including but not limited to officially designated nearby hiking trails, nature preserves, and scenic roads.	Sections VI.A., VI.B, & VI.E; Attachment 5; Attachment 8
(G) Visibility Analyses of the proposed site area and any alternative site areas.	Section VI.A; Attachment 8
(H) Photographs of the balloon float conducted at the proposed site and any alternative sites including the date, time, and demonstrated height.	Attachment 8
(I) List describing the type and height of all existing and proposed towers and facilities within a four mile radius within the site search area or within any other area from which use of the proposed towers might be feasible from a location standpoint for purposes of the application.	Attachment 2
<u>Application Guideline</u>	<u>Location in Application</u>

(J) A description of efforts to share existing towers, including but not limited to installations on electric transmission poles, or to consolidate telecommunications antennas of public and private services onto the proposed facility including efforts to offer tower space, where feasible at no charge for space for municipal antennas.	Section IV; Attachment 2
(K) A description of technological alternatives and a statement containing justification for the proposed facility.	Section III.C
(L) A description of rejected sites with a U.S.G.S. topographic quadrangle maps marked to show the location of rejected sites.	Section IV.A; Attachment 2
(M) A detailed description and justification for the sites selected, including a description of siting criteria and the narrowing process by which other possible sites were considered and eliminated including, but not limited to, environmental effects, cost differential, coverage lost or gained, potential interference with other facilities, and signal loss due to geographical features compared to the proposed site.	Section IV.A; Attachment 2
(N) A statement describing hazards to human health, if any, with such supporting data, including signal frequency, power density and references to regulatory standards.	Section VI.C; Attachment 7
(O) A statement of estimated costs for site acquisition, construction, and equipment for a facility at the various proposed sites of the facility, including all candidates referred to in the application.	Section IX.A
(P) A schedule showing proposed program of site acquisition, construction, completion, operation, and relocation or removal of existing facilities for the name sites.	Section IX.B
(Q) A statement indicating that, weather permitting, the applicant will raise a balloon with a diameter of at least three feet, at the sites of the various proposed sites of the facility, including all candidates referred to in the application, on the date of the CSC's first hearing on the application or at a time otherwise specified by the CSC.	Section VI.A

<u>Application Guideline</u>	<u>Location in Application</u>
(R) Such information as any department or agency of the State exercising environmental controls may, by regulation, require including but not limited to any federal, state, regional, and municipal agencies and the most recent conservation, inland wetland zoning, and plan of development documents of the municipality.	Sections VI & VII & VIII; Attachments 9 & 11
(S) Description of proposed site clearing for access road and compound including type of vegetation scheduled for removal and quantity of trees greater than six inches diameter at breast height and involvement with wetlands.	Section V & VI.D; Attachments 3, 4, 5 & 6
(T) A statement explaining mitigation measures for the proposed facility including, but not limited to, construction techniques designed to minimize adverse effects on natural areas and sensitive areas, special design features made specifically to avoid or minimize adverse effects on natural areas and sensitive areas, establishment of vegetation proposed near residential/recreation/scenic areas, methods for preservation of vegetation for wildlife habitat and screening, and other environmental concerns identified by the applicant, the CSC, or any other public agency.	Sections VI.D & VII.D; Attachments 3, 4, 5, 6 & 10